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Title: Perioperative Clinical Nurse Specialist Role Delineation: A Systematic Review

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Background: A clearly defined role of the Perioperative Clinical Nurse Specialist (PCNS) is not identified.

Purpose: The purpose of this study was to provide recommendations for a delineated role of the PCNS that will provide role clarity and practice guidance.

Methods: A systematic review of the literature was conducted utilizing an adaptation of Rheiner's "Role Theory Framework for Change". The initial search yielded 6374 articles. Thirteen percent (859) of the articles met inclusion criteria. In order to ensure consistency and confirmability, two members read each article and entered a synopsis into a review summary table. Synopses were analyzed using both deductive and inductive techniques.

Results: There was no uniform role for the CNS identified through the literature,

Conclusions: Competencies and educational preparation of the CNS are well defined by professional organizations however many nurses use the title without the credentials. Versatility of CNS practice, the lack of core or specialty certification, and the variance of state recognition all contribute to role confusion. Future research should evaluate the merging of the CNS and NP titles; the presence of PCNSs, their functions, spheres of influence, and patient outcomes.

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Dear Nancy,

Thank you for your interest in our research. Attached is our manuscript. We look forward to hearing from you and your reviewers.

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Perioperative Clinical Nurse Specialist Role Delineation: A Systematic Review

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Abstract

A clear role for the Perioperative Clinical Nurse Specialist (PCNS) is not identified. Using Role Theory, a systematic review of literature was conducted to provide recommendations for a delineated role. The search yielded 6,374 articles, 13% (859) met criteria. Two members read each article, entered a synopsis, then the team analyzed the articles. No uniform role for the CNS was identified. Versatility of CNS practice, lack of certification exams, and variance of state recognition all contribute to role confusion. Future research should evaluate the merging of CNS and Nurse Practitioner titles; the PCNS functions, spheres of influence, and patient outcomes.

Perioperative Clinical Nurse Specialist Role Delineation: A Systematic Review

A clearly defined role of the Perioperative Clinical Nurse Specialist (PCNS) has not been identified in the literature. Without obvious role delineation, the PCNS enters the healthcare setting at a disadvantage that may result in an ineffective utilization of financial resources and personnel. Role confusion, role ambiguity, and the inability to show cost-benefit are some of the primary challenges the Clinical Nurse Specialist (CNS) encounters [1-3].

The purpose of this study was to utilize an evidence-based approach to provide recommendations for a delineated role of the PCNS that would provide role clarity and practice guidance. Using a systematic review of the literature, the researchers analyzed the defined roles of the CNS in perioperative and non-perioperative practice and compared these roles to those of the Registered Nurse (RN) and Nurse Practitioner (NP) within the perioperative environment to answer the research question: What is a Perioperative Clinical Nurse Specialist? The specific study objectives are to compare and contrast the roles, competencies, and educational preparation of the previously stated specialties. As well as to identify and describe organizations/systems that influence their utilization and professional organizations that develop/recommend competencies and advanced certification. This article will focus on the objectives of role and utilization.

Findings from this review provided a description of the roles, skills, and activities performed by the PCNS. The researchers made recommendations on appropriate PCNS utilization, which in turn should lead to positive patient outcomes throughout the

perioperative continuum. With decreased role ambiguity and better use of the PCNS, one can anticipate maximized patient outcomes and a more effective organization.

Background and Significance

Definitions, roles, and expectations for the CNS and NP have been well documented in the literature; however, only a few published articles provide direction specifically to the PCNS [2-5]. While Zuzelo provided examples of characteristics and opportunities for the perioperative CNS and NP, a lack of literature that offered substantial job descriptions or delineated responsibilities for the PCNS was acknowledged [3]. An understanding of expectations, concepts, and performance is essential to guide the development of the PCNS role.

The National Association of Clinical Nurse Specialists (NACNS) described the CNS as a RN, who through study and supervision at a graduate level has become an expert in a defined area of knowledge and practice in a selected clinical area of nursing [6]. The American Academy of Nurse Practitioners (AANP) defined the NP as an RN with specialized graduate education and clinical competency to provide health and medical care for diverse populations in a variety of primary care, acute, and long-term settings [7].

Hamric and Spross identified the classic roles of the CNS as educator, researcher, consultant, and expert practitioner [8]. In later works, the role of change agent (leader) was included in the CNS's sphere of influence [1]. The versatility of CNS roles has often led to uncertainty among administrators and left CNSs to identify their own position within the organization. Thus, illumination of CNS functions is essential not

only to prevent role conflict but also to depict the qualities that differentiate the CNS from the RN [2, 9, 10].

Several authors have addressed the impact of role clarity on the Advanced Practice Nurse (APN), especially on the CNS [5, 11, 12]. Morrison proposed that with "careful planning, open communication, and patience, the benefits to the health care system and the patients affected by the CNS role will become apparent" ([5] p.229). Hamric et al. also identified advantages of obtaining a consensus regarding the CNS role [1]. Role consensus provides more consistency in graduate curricula and leads to a better understanding of the CNS functions among healthcare providers, patients, and administration.

McFadden and Miller identified the importance that role clarity plays in justifying the value and cost-effectiveness of the CNS to administration [13]. The benefits of the CNS must be evident to the administration in order to align these assets with the goals of the institution. Understanding the CNS role and the effect that role has on patient outcomes is critical. Conversely, uncertainty regarding CNS utilization in healthcare could jeopardize that position within the institution.

Lending to role confusion, a study by Fenton and Brykczynski reported roles of the CNS and NP to be similar in some aspects but distinctly different in others [14]. These researchers found that the CNS was more active as a consultant, liaison, and advocate between the organization, patients, and their families. Additionally, the CNS was frequently involved in the management role and development of policies and procedures with a systems focus. In contrast, the primary function of the NP is direct patient care. However, both specialties were shown to provide case management,

education, as well as patient advocate functions. Although the roles of the NP and CNS have blended over the last 20 years, researchers and professional organizations have explored the functions of both specialties and concluded that continuing with separate career pathways is necessary to decrease role confusion [3, 6, 15].

In the preliminary literature review, various roles of the NP and CNS in non-perioperative nursing practice were defined; however, no apparent role description for the PCNS was found. The lack of published data delineating the role of the PCNS further substantiated the need to conduct this study.

Methods

Conceptual Framework

A descriptive research design was utilized with Role Theory as a framework. Role Theory has been used to evaluate, explain, and describe the CNS roles and practice patterns [2]. The use of a systematic review of literature is an effective method to identify, compare, and define roles [16-18]. A systematic review allows the discovery of all relevant completed studies on the research topic and provides a foundation upon which investigators can establish their authority, report findings, and make recommendations for follow-up studies [19].

Utilizing Role Theory, Rheiner identified three factors needed to define a specific role as; expectations, conception, and performance [20]. Role expectations are the attributes that members of an organization believe an individual will perform; role conception is how the individual defines the role. Role performance encompasses these two factors. To perform a role adequately, one must fully understand the expectations. When a role is not clearly defined, conflict ensues. Performance of the PCNS is

ultimately dependent upon agreement between these factors, resulting in a clearly delineated role (see Figure 1).

Search Strategy

The results from a feasibility study along with the study objectives provided guidance in the selection of 21 keyword phrases (see Table 1). The keyword phrases were searched in the order depicted in Table 2. The research team made a sample comparison of multiple metasearch engines and decided upon Medline via PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Mamma.com, and Metacrawler.com as the final search engines.

Inclusion criteria allowed for any articles published in the United States (US) or foreign counties from 1990 – 2005. Articles not written in English upon retrieval were excluded due to the potential for researcher bias and/or misinterpretation of the data during translation by the research team.

A review summary table (RST) was developed to record data gathered from the systematic review. The table included specific information such as author, team members assigned to articles, a brief synopsis of each article, and implications related to study objectives.

Training

After Institutional Review Board approval, the team received training on search strategies and data compilation. Search strategy training included the use of truncation and Boolean operators. The training on data compilation required team members to independently review an article with subsequent input into the RST. The information

entered was reviewed by the team members and discussed as a means of determining inter-rater reliability of the data collected and recorded.

Data Compilation

The search engine results were reviewed for relevance to the study objectives. Deletions were made by duplicate, title, and abstract; additionally, articles not available by December 31, 2005 were excluded. Any deletion required agreement by at least two team members to ensure the confirmability of the data. Further analysis of the website literature revealed that Mamma.com and Metacrawler.com had similar content. A decision was made to maintain only the Metacrawler.com results for potential augmentation when there was an identified lack of data related to a specific objective. The final bibliography from PubMed and CINAHL contained 859 articles (see Figure 2).

Two team members were assigned to read each article. The primary reviewer entered a brief synopsis of the article into the RST. The second team member then reviewed the article and made additional entries, if warranted. Both research team members' input was maintained to ensure that all themes were captured. This dual researcher approach increased data validity and decreased bias.

Following the primary and secondary reviews, a master RST was compiled. The research team reviewed the synopses in the RST to provide evidence-based recommendations and formulate an answer to the research question: What is a Perioperative Clinical Nurse Specialist?

Results and Findings

Data Analysis Procedure

Out of the original bibliography of 6,374 articles, only 13% (859) met the study objective criteria and were reviewed. The strategy utilized by the research team for content analysis was to document a synopsis of the article based upon the study objectives in the RST. Additionally, specific objectives were assigned to each article which allowed for identification of frequent themes.

The research team evaluated the literature with a deductive analysis process, looking for keywords or phrases from the study objectives. Inductive analysis was also accomplished to identify unanticipated themes that emerged in the literature. The themes that developed utilizing these two different approaches were then integrated by looking for relationships amongst the themes throughout the five objectives.

The review process was accomplished independently, in small groups, and as an entire team to ensure that a comprehensive analysis was performed. This team approach allowed for different perspectives to be presented which provided a broader understanding of the themes and their relationship to the study. The analysis was accomplished in this manner to increase inter-rater reliability and enhance validity of the findings.

Results

Numerous articles reviewed by the research team focused on the CNS and NP in the non-perioperative setting; however, limited citations related to the RN, NP, and CNS in perioperative practice were noted. The brief referrals to the RN in the perioperative setting only provided a historical perspective.

Findings

Role.

A clear role definition with distinct expectations is essential to establish the functions an APN will perform. Role as defined in the study is behaviors, actions, and characteristics that an individual exhibits in a given situation. The systematic review of the literature revealed that while the nurse titled as a NP has a distinct role in the healthcare community, the nurse titled as a CNS is lacking role clarity. Authors discussed the roles of the CNS in the non-perioperative setting as educator, practitioner, researcher, consultant, and administrator [21-24]. These previously mentioned roles along with the role of change agent make up the traditional roles of the CNS. Additional roles of the CNS identified in the literature included case manager, collaborator, mentor, preceptor, advocate, liaison, and role model [21, 23-30].

The articles concerning the perioperative NP documented the function predominantly as a direct care provider in pre- and post-operative settings. The intra-operative setting, although rarely mentioned, identified the primary role of the perioperative NP as a first assistant [11, 31-33].

Of the articles found addressing the PCNS, the majority of authors stated that the traditional roles are performed in all three realms of the perioperative setting: pre-operative, intra-operative, and post-operative. However, mention was made of the CNS practicing solely in the Post Anesthesia Care Unit setting [34]. The PCNS functions as an educator, clinical expert, consultant, researcher, and liaison [3, 5, 35, 36]. The PCNS impacts the surgical environment through activities such as patient advocacy, collaboration with surgeons, consultant for nursing staff, preceptor, physical and cultural

assessment, and offering clinical insight [5, 35, 36]. One author examined the essential characteristics and spheres of influences outlined by NACNS to differentiate the CNS and NP practice within the perioperative setting [3].

Common themes identified in the literature included ambiguous role expectations, merging of the CNS and NP titles, and the diverse utilization of APNs in various countries. Also noted were inadequate socialization to the roles, inconsistent job descriptions, multiple accountability, inconsistent placement, and unclear criteria for evaluation.

The versatility of the CNS practice often leads to role ambiguity, misinterpretation of their value and functions, improper utilization, and ultimately the lack of validity of the CNS title. CNSs still have difficulty defining, articulating, and justifying their role to administrators, physicians, and other nurses. The ambiguity is further enhanced because role expectations are defined differently among professional groups and academia [12, 37]. To have optimal role performance, the CNS must have a clear role conception, an understanding of how an organization functions, and where they can have the most impact by combining clinical expertise with knowledge of the system [21, 38]. Additionally, the ability to convey their contribution to cost-containment and positive patient outcomes is essential. Due to the lack of role clarity and consistency, CNSs must define their role in the organization or risk having the role defined for them [39, 40].

The similarity of the traditional roles of the CNS and NP has stimulated a great deal of discussion about merging the titles. However, the literature has shown that the focus of the NP is primarily directed toward the practitioner role, providing care to a

general patient population [14, 31, 40, 41]. Conversely, the CNS is more systems-focused and provides care to a specialty group of clients. Therefore, the time allocation of CNSs was found to be more evenly distributed among the traditional roles [15, 42-45].

The validity of the CNS titled as an APN is an issue not only in the US, but also in other countries. Authors of articles published in foreign countries defined various roles of the CNS and NP. No consistency was found among these countries regarding role definition, title, or utilization. Frequently, healthcare industries in foreign countries look to the US for guidance regarding APN role evolution. The variability in scope of practice as well as the lack of common nomenclature has made it difficult to evaluate the roles of APNs [46-49].

Utilization.

Findings on the NP in the perioperative setting revealed their primary function as a direct care practitioner. Conversely, the utilization of the CNS, both perioperative and non-perioperative, showed no standardization or consistency. Utilization is influenced by various systems including the Federal and State Governments, Health Maintenance Organizations (HMO), collaborating physicians, individual institutions, the practicing individual, and professional organizations.

The ultimate goal of the Federal and State Governments is to ensure safe healthcare delivery to the public. This safe delivery of healthcare is accomplished through management of titling, licensure, and educational requirements of nursing [50, 51]. The literature demonstrated a need for lobbying on issues including modifications to the state Nurse Practice Act for recognition of advanced nurse titling, uniformity in APN

requirements, and independent reimbursement by Medicare and Medicaid [52-55]. The inconsistency in titling from state to state lends to role confusion and variable utilization for the CNS. While NPs are recognized as an APN in almost all states, several states fail to recognize the CNS as an APN [56-58].

The concept of healthcare reform was a recurrent theme having influenced the fiscal responsibility of organizations that employ APNs. This need for cost-containment has required the CNS to provide evidence of their worth through measurable patient outcomes [13, 59, 60].

Since conception, the APN has been challenged within the medical community. Some institutions or states require the APN to have a collaborating physician in order to practice, affecting their utilization [61-63]. Establishing a working relationship and developing the trust needed for this partnership is another burden on the APN.

Ways that organizations choose to employ APNs also affects their utilization. Some institutions support the entire scope of CNS practice allowed by state statutes and regulations, while other institutions restrict the CNS's practice [64]. For example, the state grants the CNS prescriptive authority; however, the institution may not allow the CNS to prescribe. Additionally, organizations may choose not to employ a CNS due to the inability to bill for services in the same manner as other APNs [64, 65]. Some organizations, especially in the rural setting, are utilizing the merged CNS/NP to get a wider range of outcomes for less money [66].

Personal choices by APNs about their scope of practice also affect utilization. The inability to identify the expected role performance by the newly hired or the newly graduated CNS often leads to role confusion, either with the practitioner or their

administrators, and ultimately results in improper utilization [67-69]. Marketing is a concept seen repeatedly in the literature as necessary for promotion of the CNS. Identification of abilities and role expectations is vital, but more important is the marketing of those abilities in an attempt to find the right fit with an organization, thus promoting the most effective outcomes [13, 70, 71].

Professional organizations such as the American Medical Association (AMA) and American Nurses Association (ANA) have had a great influence on the utilization of the CNS and NP. The AMA is concerned with the independence of APN providers and recommends their practice be collaborative with or supervised by a physician [61, 72]. Collaboration agreements and supervision are agreed upon forms of practice for the NP and the CNS that work within the medical realm providing diagnosis and treatment of disease [72, 73]. When CNSs focus their care within the nursing realm, the need for such an arrangement does not exist.

The ANA combined the Council of Primary Healthcare Nurse Practitioners and Council of Clinical Specialists; this action led to an increase in the merging of the CNS/NP educational programs and controversy between the two advanced practices [45, 74]. Following the merger of the councils, the ANA recognized the potential impact of this action and recommended further research on the similarities and differences between the CNS and NP [75]. The CNS and NP organizations endorse a standardized curriculum and tailored core competencies that guide the utilization of each practitioner; however, NACNS does not endorse blended CNS/NP programs. Additionally, NACNS defers to the specialty organizations for utilization guidance within a specialized area of care [6].

Limitations

Barriers identified during data analysis included search terms, operational definitions, and the potential for researcher bias. The limited return on articles concerning the perioperative RN, NP, and CNS prompted the research team to analyze the search terms for potential study limitations. The scope of the search terms for perioperative NP and CNS revealed no flaws; however, the team acknowledged the lack of the search phrase “perioperative registered nurse”. The initial assumption was that articles regarding the perioperative RN would be captured with the other search keywords and combinations, yet this was not the case. The determination was made to utilize the articles found and supplement information on the perioperative RN with internet publications from Association of periOperative Registered Nurses (AORN).

Several articles defined terms differently than the study leading to confusion among the research team and reinforcing the need to clearly define terms. The term “title” was added and the study’s operational definitions were applied to the articles reviewed. To eliminate bias and capture all pertinent information, the contribution of both members was reserved.

Implications to Nursing

Role.

Advanced Practice Nurses in perioperative practice have no clear role definition, with the exception of the Certified Registered Nurse Anesthetist (CRNA), who has a specific role and set of competencies to guide their performance. As indicated by the theoretical model, the role performance of a CNS is affected by both the CNS’s personal conception of the role and the role expectations from outside sources such as

professional organizations, academia, administrators, physicians, and peers. Clinical Nurse Specialists, specifically those in the perioperative realm, have struggled with role performance due to the inability to effectively define their scope of care or articulate their usefulness to administration. This role ambiguity places the individual CNS in a position where they may have to define their own role or have the organization determine it for them. Additionally, organizations may question utilization of CNSs and whether they are cost-effective members of the healthcare team.

The broad domains of the CNS allow for them to be dispersed across the continuum of care. Unfortunately, the versatility permits organizations to place the CNS in positions to “fill in the gaps”, disregarding their title and the value of their expertise. Frequently, CNSs are appointed to management or administrative roles. These roles are addressed but not overly emphasized in CNS curricula, thus leaving the individual feeling unprepared.

Role confusion is further increased by a lack of conformity throughout the 50 states regarding CNS titling and scope of practice. This confusion is not limited to the United States, but also is a problem internationally with the full extent of role confusion difficult to ascertain. Undoubtedly, healthcare reform has and will affect CNSs both internationally and in the US, forcing them to expand their roles and demonstrate their fiscal value.

In contrast, NPs do not have the lack of role clarity inherent to the CNS. Similar to the CRNA, the NP has a specified job description and set of competencies which leads the organization and healthcare team to find validity in their titling and utilization. Family Nurse Practitioners find the most acceptance within the healthcare community;

however, NPs who expand their practice outside the scope of primary care, such as perioperative NPs, may not receive the same support. Consequently, these perioperative NPs are faced with the same role ambiguity as CNSs.

While discussed in the literature, the effectiveness of the CNS/NP merger was predominately presented as opinion, and scientific studies are needed to evaluate the concept. The major benefit attached to the merger would be increased validity of the CNS attributed to the NP title. Similarities were present in academia but were not evident in practice. The NP and CNS have a distinct separation between title and scope of practice as evidenced by the NP working in the medical realm and the CNS in the nursing realm.

The lack of a defined role for the CNS was a saturated topic throughout this literature review. Accomplishing standardization of titling and scope of practice by all 50 states will allow for conformity and uniformity of CNS practice.

Utilization.

All of the specific objectives of this study: role, educational preparation, competencies, and professional organizations affect the utilization of the CNS. Other determining factors in CNS utilization include State Boards of Nursing, organizations or facilities, and the individual practitioner.

Even though the State Boards of Nursing determine the scope of practice for the CNS, lack of certification has led to varying recognition and hence, varying utilization. Standardization of titling, certification, and scope of practice by the State Boards of Nursing will allow for recognition of the CNS nationwide and therefore uniform utilization.

Many organizations are not aware of the abilities of the CNS due to the lack of role clarity and effective marketing. Therefore, only through proper marketing will a match with the organization's need and the CNS's ability effectively occur. Organizations may choose a CNS to fill a specific need. Rural communities may desire a merged CNS/NP that can perform at the highest possible level to increase cost-effectiveness. Nursing academia is accommodating that perceived need and providing a blended CNS/NP that is primarily utilized as an NP.

The lack of uniform utilization often leaves individuals to determine their own position within an organization. In addition, some individuals may have a desire to perform only certain aspects of CNS roles. This ambiguity leads to varied expectations of the CNS by their administrators, physicians, and peers.

The National Council of State Boards of Nursing released the 2006 draft Vision Paper which proposes to eliminate the CNS as an APN [76]. This reinforces the need for CNS practitioners to market their role within the APN community.

Future Research

Based on the specific objectives outlined in this study, four gaps were identified that should lead to further research. Conducting future research is important to increase the body of nursing science directed towards the perioperative environment, thereby enhancing patient safety and improving outcomes.

First, determine how many CNSs, as defined by NACNS, are practicing in the perioperative arena. This information will provide a foundation of practicing PCNSs that should drive future research.

Second, identify how PCNSs are functioning in the work environment. The stratification of PCNS roles and spheres of influence will increase the link between theoretical and direct patient care outcomes.

Third, compare and contrast patient outcomes in facilities that have defined PCNSs against facilities without PCNSs. Evidence of positive patient outcomes will lend support to the need for perioperative advanced practice certification.

Finally, research must be conducted regarding the blended CNS/NP in perioperative practice. Research focused on patient outcomes, in correlation with the dual versus stand-alone titles, will determine future direction of advanced nursing practice in the perioperative setting.

Conclusion

No substantial evidence supports the specific role of the PCNS; however, the literature is saturated with examples of various other CNS practice and positive patient outcomes. The current healthcare climate is ready for the growth and development of the PCNS—giving a needed dimension of advanced nursing care to the perioperative setting. With this development, a need for scientific research will arise to support evidence-based outcomes in the perioperative arena.

A framework to guide CNS educational curriculum as well as practice is provided by the NACNS. A clear role conception for the PCNS can be defined by combining the spheres of influence outlined by NACNS with the APN competency statements provided by the Association of periOperative Registered Nurses. Role conception along with extensive marketing could allow organizations to visualize the role expectations and

provide a foundation for effective role performance and ultimately positive patient outcomes.

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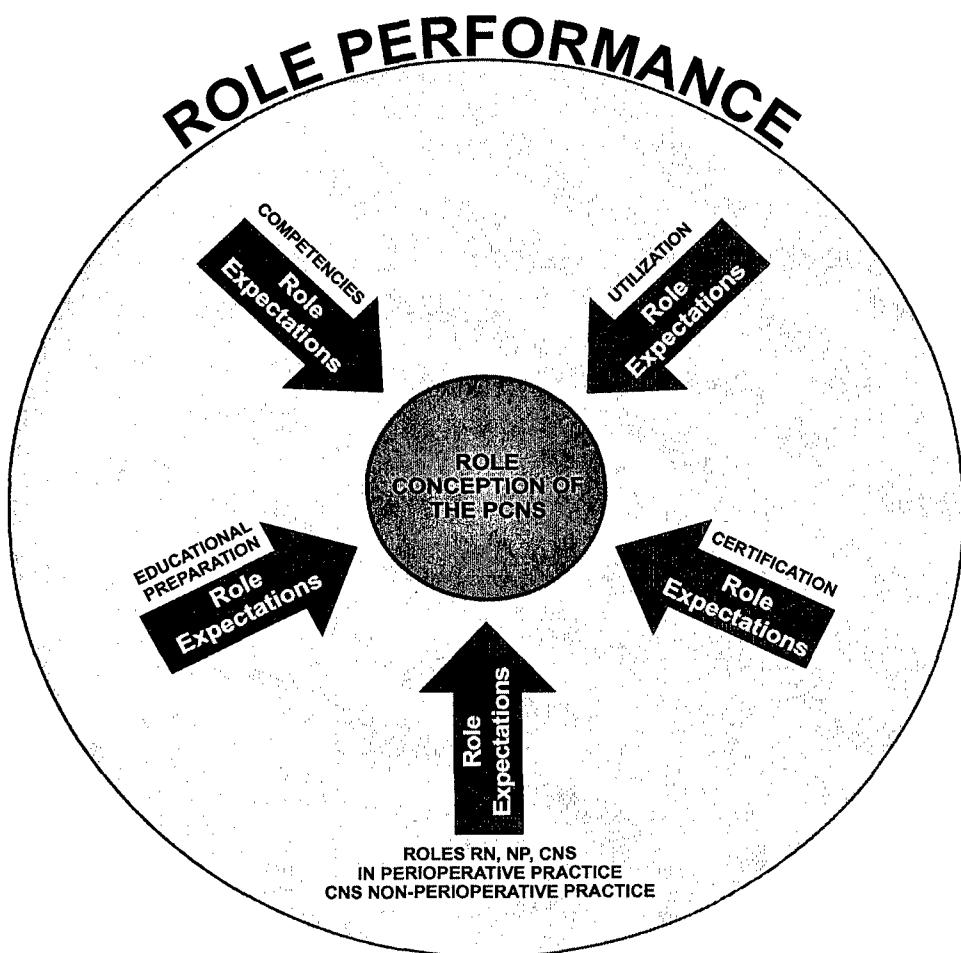


Figure 1. Theoretical Model: Perioperative Clinical Nurse Specialist Role Development©.

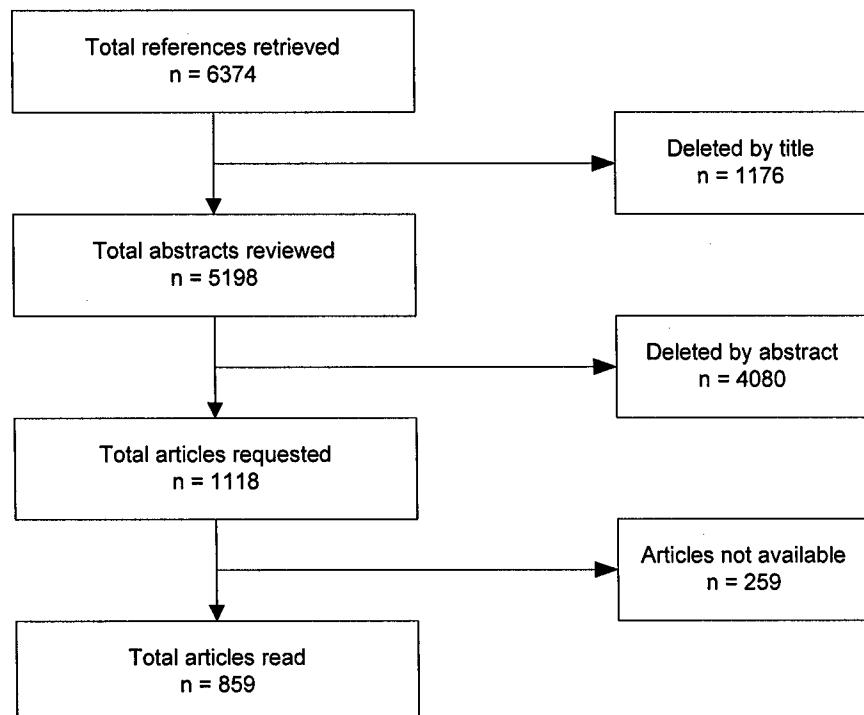


Figure 2. Search Engine Results.

Table 1. Keyword Phrases

Designator	Keyword Phrase
A	Perioperative Clinical Nurse Specialist
B	Clinical Nurse Specialist
C	Nurse Practitioner
D	Education
E	Certification
F	Licensure
G	Association of periOperative Registered Nurses+AORN ^a
H	Certification Board Perioperative Nurses (CBPN)
I	Competency and Credentialing Institute (CCI)
J	American Association of Colleges of Nursing (AACN)
K	National Association of Clinical Nurse Specialists (NACNS)
L	Responsibilities
M	Job description
N	Position statement
O	Federal Healthcare System
P	Health Maintenance Organization
Q	Military
R	Air Force
S	Army
T	Navy
U	Public Health Service

^aAORN underwent a name change in 1999 and the abbreviation did not change thus it was included in all searches.

Table 2. Keyword Search Strategy

Order	Keyword								
1	A	13	AG	25	AK	37	AO	49	AS
2	B	14	BG	26	BK	38	BO	50	BS
3	C	15	CG	27	CK	39	CO	51	CS
4	AD	16	AH	28	AL	40	AP	52	AT
5	BD	17	BH	29	BL	41	BP	53	BT
6	CD	18	CH	30	CL	42	CP	54	CT
7	AE	19	AI	31	AM	43	AQ	55	AU
8	BE	20	BI	32	BM	44	BQ	56	BU
9	CE	21	CI	33	CM	45	CQ	57	CU
10	AF	22	AJ	34	AN	46	AR		
11	BF	23	BJ	35	BN	47	BR		
12	CF	24	CJ	36	CN	48	CR		

What is a PCNS?

LCDR Dennis Glover
MAJ Laura Newkirk
Maj Lisa Cole
Maj Theodore Walker
Maj Kelly Nader

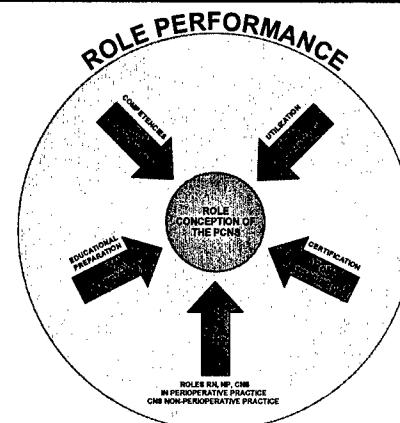
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Problem Statement

A clearly defined role of the Perioperative Clinical Nurse Specialist (PCNS) has not been identified in the literature



Study Objectives

Compare and Contrast perioperative RN, NP, CNS and non-perioperative CNS regarding

- Roles
- Competencies
- Educational Preparation

Identify and Describe perioperative RN, NP, CNS and non-perioperative CNS regarding

- Organizations/systems that influence utilization
- Professional Organizations that develop or recommend competencies and advanced certification

Methodology

- Operational Definitions
 - 15 relevant terms defined
- Research Design
 - Systematic Review of the Literature
- Search Strategy
 - Keyword selection
 - Search engine selection
 - Inclusion / exclusion criteria
 - Data collection method
- Procedures
 - Training



Methodology

- Data Compilation

	PubMed	CINAHL
Initial Search	3916	9956
Duplicates Deleted	1734	2491
Articles Ready For Title Review	2182	7465
Total Combined	9647	
Duplicates Deleted	3273	
Deleted By Title	1176	
Deleted By Abstract	4080	
Deleted By Methodology	8529	
Total For Article Review	1118	
Deleted Duplicates And Not Available	259	
Final Bibliography	859	



Data Analysis Procedure

- Strategy

- Inductive and Deductive

- Credibility



Findings

Compare and Contrast perioperative RN, NP, CNS and non-perioperative CNS regarding

- Roles
- Competencies
- Educational Preparation



Findings

Identify and Describe perioperative RN, NP, and CNS and non-perioperative CNS regarding

- Organizations/systems that influence utilization
- Professional Organizations that develop or recommend competencies and advanced certification



Implications to Nursing

- Role
- Competencies
- Educational Preparation
- Systems that Influence Utilization
- Advanced Certification



Limitations

- Search Terms
 - Failed to search “perioperative RN”
- Researcher Interpretation
- Operational Definitions
 - Added “Title”



Future Research

- Define number of practicing CNSs in the perioperative environment.
- Determine how PCNSs function in their environment.
- Compare patient outcomes in organizations where PCNSs are utilized versus where they are not.
- Compare patient outcomes between the PCNS and the blended CNS/NP in perioperative practice.

Questions ?



Running head: PCNS ROLE: SYSTEMATIC REVIEW OF THE LITERATURE

Perioperative Clinical Nurse Specialist Role Delineation: A Systematic Review

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**THE VIEWS EXPRESSED IN THIS ARTICLE ARE
THOSE OF THE AUTHOR AND DO NOT REFLECT
THE OFFICIAL POLICY OR POSITION OF THE
UNITED STATES AIR FORCE, DEPARTMENT OF
DEFENSE, OR THE U.S. GOVERNMENT.**

Perioperative Clinical Nurse Specialist Role Delineation: A Systematic Review

A clearly defined role of the Perioperative Clinical Nurse Specialist (PCNS) has not been identified in the literature. Without obvious role delineation, the PCNS enters the healthcare setting at a disadvantage that may result in an ineffective utilization of financial resources and personnel. Role confusion, role ambiguity, and the inability to show cost-benefit are some of the primary challenges the Clinical Nurse Specialist (CNS) encounters (Hamric, Spross, & Hanson, 2000; Scott, 1999; Zuzelo, 2003).

Using a systematic review of the literature as a framework for this study, the researchers analyzed the defined roles of the CNS in perioperative and non-perioperative practice and compared these roles to those of the Registered Nurse (RN) and Nurse Practitioner (NP) within the perioperative environment to answer the research question: What is a Perioperative Clinical Nurse Specialist? The purpose of this study was to utilize an evidence-based approach to provide recommendations for a delineated role of the PCNS that would provide role clarity and practice guidance.

The specific study objectives were to analyze the relationship between the RN, NP, and CNS in the perioperative setting, and the CNS in the non-perioperative setting by:

1. Comparing and contrasting the roles;
2. Comparing and contrasting the competencies;
3. Comparing and contrasting the educational preparation;
4. Identifying and describing the organizations/systems that influence utilization; and

5. Identifying and describing the professional organizations that develop/recommend competencies and advanced certification.

Findings from this review provided a detailed description of the roles, skills, and activities performed by the PCNS. The researchers made recommendations on appropriate PCNS utilization, which in turn should lead to positive patient outcomes throughout the perioperative continuum. With decreased role ambiguity and better use of the PCNS, one can anticipate maximized patient outcomes and a more effective organization.

Literature Review

Definitions, roles, and expectations for the Clinical Nurse Specialist (CNS) and Nurse Practitioner (NP) have been well documented in the literature; however, only a few published articles provide direction specifically to the Perioperative Clinical Nurse Specialist (PCNS) (Davies & Hughes, 2002; Morrison, 2000; Scott, 1999; Zuzelo, 2003). While Zuzelo (2003) provided examples of characteristics and opportunities for the PCNS and NP, a lack of literature that offered substantial job descriptions or delineated responsibilities for the PCNS was acknowledged. An understanding of the expectations, concepts, and functions is essential to guide the development of the PCNS role.

The Advanced Practice Nurse (APN) includes the CNS, NP, Certified Registered Nurse Anesthetist (CRNA), and Certified Nurse Midwife (CNM). While the CRNA and CNM have very distinct roles, the practice of the NP and CNS are made up of many intertwined roles. Hester and White (1996) proposed that the nursing community, in their haste to determine the role of the APN, had not fully investigated the roles and definitions of the NP and CNS.

The National Association of Clinical Nurse Specialists (NACNS) described the CNS as a Registered Nurse (RN), who through study and supervision at a graduate level has become an expert in a defined area of knowledge and practice in a selected clinical area of nursing (National Association of Clinical Nurse Specialists [NACNS], 2004). The American Academy of Nurse Practitioners (AANP) defined the NP as an RN with specialized graduate education and clinical competency to provide health and medical care for diverse populations in a variety of primary care, acute, and long-term settings (American Academy of Nurse Practitioners [AANP], 2002).

The American Nurses Association (ANA) published a definition of the CNS in 1979 based on the concept of an expert practitioner in a specialized area of nursing (American Nurses Association [ANA], 2005). However, the uniqueness of this multifaceted role has led to many misperceptions and ultimately misuse of the CNS.

Hamric and Spross (1989) identified the classic roles of the CNS as educator, researcher, consultant, and expert practitioner. In later works, the role of change agent (leader) was included in the CNS's sphere of influence (Hamric, Spross, & Hanson, 2000). The versatility of this role has often led to uncertainty among administrators and left CNSs to identify their own position in the organization. Additionally, the newly graduated CNS may experience difficulty in implementing all of the roles (Harris et al., 1996). Thus, illumination of the CNS functions is essential not only to prevent role conflict but also to depict the qualities that differentiate the CNS from the RN (Martin, 1999; Scott, 1999; Topham, 1987).

Several authors have addressed the impact of role clarity on the APN, especially on the CNS (Hodson, 1998; Morrison, 2000; Sechrist & Berlin, 1998). Morrison (2000)

proposed that with “careful planning, open communication, and patience, the benefits to the healthcare system and the patients affected by the CNS role will become apparent” (p.229). Hamric et al. (2000) also identified advantages of obtaining a consensus regarding the CNS role. Role consensus provides more consistency in graduate curricula and leads to a better understanding of the CNS functions among healthcare providers, patients, and administration.

McFadden and Miller (1994) identified the importance that role clarity plays in justifying the value and cost-effectiveness of the CNS to administration. Cost is not only measured in dollars but also in patient outcomes. The benefits of the CNS must be evident to the administration in order to align these assets with the goals of the institution. Administration closely observes the practice of all members to justify their cost-effectiveness. Understanding the CNS role and the effect that role has on patient outcomes is critical. Conversely, uncertainty regarding CNS utilization in healthcare could jeopardize that position within the institution.

Lending to role confusion, a study by Fenton and Brykczynski (1993) reported roles of the CNS and NP to be similar in some aspects but distinctly different in others. These researchers found that the CNS was more active as a consultant, liaison, and advocate between the organization, patients, and their families. Additionally, the CNS was frequently involved in the management role and development of policies and procedures with a systems focus. In contrast, the primary function of the NP is direct patient care. However, both specialties were shown to provide case management, education, and function as a patient advocate. Although the roles of the NP and CNS have blended over the last 20 years, researchers and professional organizations have

explored the functions of both specialties and concluded that continuing with separate career pathways is necessary to decrease role confusion (NACNS, 2004; Williams & Valdivieso, 1994; Zuzelo, 2003).

In the preliminary literature review, the roles of the NP and CNS in non-perioperative nursing practice were defined; however, no apparent role description for the PCNS was found. Establishing distinct expectations, role behaviors, and functions will help guide the employment of the PCNS in various healthcare settings. Therefore, a clear role definition that emphasizes the extent of influence and support the PCNS can offer to this unique work setting is crucial. The lack of published data delineating the role of the PCNS further substantiated the need to conduct this study. The extensive systematic review of the literature provided an evidence-based approach for the research team to offer recommendations and practice guidance for the PCNS.

Conceptual Framework

A descriptive research design was utilized with Role Theory as a framework providing the foundation for discussion of the preparation and actions needed to facilitate change (Rheiner, 1982). "Role Theory represents a collection of concepts...that predict how actors will perform in a given role" (Hardy & Conway, 1978, p.17). This theory has been used to evaluate, explain, and describe the Clinical Nurse Specialist (CNS) roles and practice patterns (Scott, 1999).

Rheiner (1982) identified three factors needed to define a specific role as role expectations, role conception, and role performance. Role expectations are the attributes that members of an organization believe an individual will perform; role conception is how the individual defines the role. Role performance encompasses these

two factors. To perform a role adequately, one must fully understand the expectations. When a role is not clearly defined, conflict ensues. Performance of the Perioperative Clinical Nurse Specialist (PCNS) is ultimately dependent upon agreement between these factors, resulting in a clearly delineated role (see Figure 1). Using this theoretical model during the systematic review of the literature, the research team was able to gain an evidence-based perspective of how various expectations impact the PCNS's performance.

Methods

General Approach

Lack of a clearly defined role for the Perioperative Clinical Nurse Specialist (PCNS) was the impetus for this research. Using a systematic review of the literature as a design for this study, the researchers analyzed and synthesized content related to the study objectives. From the literature the researchers achieved a thorough analysis of defined roles, education, utilization, competencies, and certifications of nurses in the perioperative setting and clinical nurse specialists in the non-perioperative setting.

The research team consulted nursing faculty at a graduate school of nursing in the eastern United States, who had perioperative nursing, clinical nurse specialist, nurse practitioner, and nursing research expertise. The faculty team members provided guidance, feedback, and an advanced practice nursing perspective throughout the entire research process. The inclusion of these professionals, as subject matter experts, allowed the researchers to limit the bias of researcher inexperience and misinterpretation of the dimensions of the advanced nursing practices under review.

Operational definitions.

For the purpose of this systematic review, the following terms were operationally defined:

- Registered Nurse (RN): a nurse who has completed a nursing education program that allows the graduate to sit for and pass an examination for licensure as a Registered Nurse.
- Nurse Practitioner (NP): an RN with specialized graduate education and clinical competency to provide health and medical care for diverse populations in a variety of primary care, acute, and long-term settings.
- Clinical Nurse Specialist (CNS): an RN who through study and supervision at a graduate level has become an expert in a defined area of knowledge and practice in a selected clinical area of nursing.
- Perioperative Clinical Nurse Specialist (PCNS): a CNS specialized in perioperative nursing practice.
- Advanced certification: an associated examination following graduate preparation that tests knowledge, skills, and abilities needed for entry into advanced practice.
- Civilian: a non-military member.
- Competencies: knowledge, skills, and abilities necessary to fulfill the professional role functions of the RN or advanced practice nurse.
- Educational preparation: level of education achieved beyond high school or its equivalent.

- Military: members of the United States Uniformed Services to include the Army, Air Force, Navy, and Public Health Service.
- Non-perioperative nursing practice: nursing care, basic or advanced, given to a patient, family, or significant other in any area other than the perioperative setting.
- Organizations/systems: administrative or functional structure that provides the framework for accomplishment of tasks leading to the provision of healthcare or health education.
- Perioperative nursing practice: nursing care, basic or advanced, given to a patient, family, or significant other during any operative or other invasive procedure throughout the pre-operative, intra-operative, and post-operative phases of care.
- Role: behaviors, actions, and characteristics an individual exhibits in a given situation.
- Title: a formal appellation attached to the name of a person by virtue of office, rank, or attainment, i.e.: RN, NP, CNS, PCNS.
- Utilization: practical use of acquired skills in support of a goal.

Research design.

The use of a systematic review of literature is an effective method to identify, compare, and define roles (Jones, 2005; Raja-Jones, 2002; Spilsbury & Meyer, 2001). This type of review allows the discovery of all relevant completed studies on the research topic. Analyzing published literature provides a foundation upon which

investigators can establish their authority, report findings, and make recommendations for follow-up studies (Hulley et al., 2001).

Search Strategy

Keyword selection.

During the fall of 2004, the research team conducted a feasibility study in an attempt to find substantial support for the position of the PCNS. A feasibility study provides the research team with an estimate of the time commitment involved, as well as the availability of literature. Members of the research team searched the phrases "perioperative clinical nurse specialist", "surgical clinical nurse specialist", and "surgical advanced practice nurse" looking for role descriptions and utilization of the PCNS. The results revealed limited literature on this topic.

The results of the initial searches along with the study objectives provided guidance in the selection of keyword phrases (see Table 1). The keyword phrases were searched in the order depicted in Table 2. An alpha designator was assigned to each phrase for ease of identification, consistency in searches, and allowed for the combination of phrases in complex searches.

Search engine utilization.

The search engines available to the research team through Uniformed Services University of the Health Sciences (USUHS) Learning Resource Center (LRC) were reviewed with the assistance of a resource librarian. The research team, querying a test search for the term "CNS" made a sample comparison of multiple metasearch engines. After reviewing the results for content, the research team decided upon Medline via PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL),

Mamma.com, and Metacrawler.com as the final search engines. One team member maintained the master bibliography and was responsible for the compilation of the articles. The remaining team members were assigned a search engine to query.

Inclusion and exclusion criteria.

The systematic review was conducted with the inclusion and exclusion criteria listed in Table 3. The criterion allowed articles from all countries; however, the article must have been written in English upon retrieval due to the potential for researcher bias and/or misinterpretation of the data during translation by the research team. Articles that were included in the final bibliography, but then determined not to meet any of the study objectives, required a unanimous vote of the research team for exclusion from the study.

Data collection method.

A review summary table was utilized for compilation of the articles obtained from the systematic review (see Table 4). The table was developed in a Microsoft Office Excel ® spreadsheet and includes specific information such as author, team members assigned to articles, a brief synopsis of each article, and implications related to study objectives. The research team developed the review summary table based on recommendations by Burns and Grove (2001) and examples from other systematic reviews identified during the preliminary literature review process (Jones, 2005; Raja-Jones, 2002; Spilsbury & Meyer, 2001).

Procedures

Training.

The research team received approval from the USUHS Institutional Review Board (IRB) and assembled for instruction and training on the systematic review, data collection, and analysis process. Figure 2 outlines the flow of the research methods.

A research team member who had received intensive training from the resource librarians at USUHS on Endnote 9.0 and search strategies conducted the training. The training incorporated how the search would be conducted including keyword phrases, truncation, and Boolean operators for each search engine.

Standardized instruction on how to review each article and enter it into the review summary table was also provided. Each research team member independently reviewed one article, determined by the principle investigator, and placed the information in the review summary table. The information was reviewed by the team members and discussed as a means of determining inter-rater reliability of the data being collected and recorded. After discussion, final agreement upon the process of analyzing the articles and entry of data into the review summary table was achieved.

Data compilation.

The resulting bibliographies from PubMed and CINAHL were downloaded, imported, or entered into an Endnote 9.0 library and duplicate citations were deleted. The remaining bibliography was examined in stages with deletions made by title, abstract, and full text. First, any article not related to nursing practice was deleted by title. Next, the remaining abstracts were obtained and deleted if not related to the study objectives. Finally, articles that were immediately available were reviewed and deleted if

not relevant to the study objectives (see Table 5). Any deletion required agreement by at least two team members to ensure the confirmability of the data.

The compilation of the internet bibliography was challenging, as there was no way to import data into the Endnote 9.0 library and all information required manual entry. Due to the lack of abstracts associated with websites, the investigators performed the deletion process as a team to capture all relevant websites and maintain confirmability. The data collected from both internet search engines was then cross-checked for duplicates. During full text retrieval, numerous websites were identified as being inactive; it was determined by the research team to delete these websites. Further analysis of the website literature revealed that Mamma.com and Metacrawler.com had similar content. A decision was made to maintain only the Metacrawler.com results for potential augmentation when there was an identified lack of data related to a specific objective (see Table 6).

The team members equally divided the remaining bibliography for article acquisition. Articles were obtained through USUHS interlibrary loan, electronic retrieval, or photocopied from library holdings. The team member responsible for maintaining the master bibliography assigned all received articles a bibliography number. Due to time constraints of this study, articles not received by December 31, 2005 were not included. The articles were then divided among the research team for data analysis.

A primary and secondary reviewer read each article to provide inter-rater reliability and confirmability of the data. The primary reviewer assessed the applicability of the article to the study objectives and entered a brief synopsis into the review

summary table. The research team read the articles using the deductive analysis process that involves looking for the keywords or phrases of the study objectives.

Upon completion of the primary review, the second team member assigned to the article reviewed it and made additional entries if warranted. Both research team members' input was maintained to ensure that all themes were captured. This dual researcher approach increased inter-rater reliability and decreased bias.

Following the primary and secondary reviews, a master review summary table was compiled (see Appendix A). The research team reviewed the synopses in the review summary table to provide evidence-based recommendations and formulate an answer to the research question: What is a Perioperative Clinical Nurse Specialist?

Results and Findings

Initial Results

Data analysis procedure.

The research team reviewed all the articles received; however, the internet search results revealed minimal information that was not found in PubMed and Cumulative Index to Nursing and Allied Health Literature (CINAHL). The decision was made to maintain the internet bibliography only to supplement gaps in the literature obtained from PubMed and CINAHL.

The strategy utilized by the research team for content analysis included recording the themes that appeared frequently in the review summary table. The analysis process was accomplished independently, in small groups, and as an entire team to ensure a comprehensive analysis was performed. The analysis process was accomplished in this manner to increase inter-rater reliability and enhance validity of the findings.

Common themes.

Out of the original bibliography of 6,374 articles, only 13% (859) met the study objective criteria and were reviewed for content analysis (see Appendix B). Initially, the research team evaluated the literature with a deductive analysis process, looking for keywords or phrases from the study objectives. Inductive analysis was also performed to identify unanticipated themes that emerged in the literature (see Table 7).

*Findings**Objective 1: Role.*

A clear role definition with distinct expectations is essential to establish the functions an Advanced Practice Nurse (APN) will perform. Role as defined in the study is behaviors, actions, and characteristics that an individual exhibits in a given situation. The systematic review of the literature revealed that while the Nurse Practitioner (NP) has a distinct role in the healthcare community, the Clinical Nurse Specialist (CNS) is lacking role clarity.

Numerous authors discussed the role of the CNS in the non-perioperative setting. The majority of authors identified the roles of the CNS as educator, practitioner, researcher, consultant, and administrator. These previously mentioned roles along with the role of change agent make up the traditional roles of the CNS. Additional roles of the CNS identified in the literature included case manager, collaborator, mentor, preceptor, advocate, liaison, and role model.

In the search results limited citations related to the Registered Nurse (RN), NP, and CNS in perioperative practice were noted. The brief referrals to the RN in the perioperative setting only provided a historical perspective. The articles concerning the

perioperative NP documented the function predominantly as a direct care provider in pre- and post-operative settings. The intra-operative setting, although rarely mentioned, identified the primary role of the Perioperative NP as a Registered Nurse First Assistant (RNFA).

A sparse number of articles addressed the Perioperative CNS (PCNS). Of the articles found, the majority of authors stated that the CNS performs the traditional roles in all three realms of the perioperative setting: pre-operative, intra-operative, and post-operative. However, mention was made of the CNS practicing solely in the Post Anesthesia Care Unit setting.

Common themes identified in the literature included ambiguous role expectations, merging of the CNS and NP titles, and the diverse utilization of APNs in various countries. Also noted were inadequate socialization to the role, inconsistent job descriptions, multiple accountability, inconsistent placement, and unclear criteria for evaluation.

The versatility of the CNS practice often leads to role ambiguity, misinterpretation of their value and functions, improper utilization, and ultimately the lack of validity of the CNS title. CNSs still have difficulty defining, articulating, and justifying their role to administrators, physicians, and other nurses. The ambiguity is further enhanced because role expectations are defined differently amongst different professional groups and academia. To be successful, the CNS must have an understanding of how an organization functions and where they can have the most impact by combining clinical expertise with knowledge of the system. Additionally, the ability to convey their contribution to cost-containment and positive patient outcomes is essential. Due to the

lack of role clarity and consistency, CNSs must define their role in the organization or risk having the role defined for them.

The similarity of the traditional roles of the CNS and NP has stimulated a great deal of discussion about merging the roles. However, the literature has shown that the focus of NPs is primarily directed toward the practitioner role, providing care to a general patient population. Conversely, the CNS is more systems-focused and provides care to a specialty group of clients (see Appendix A). Therefore, the time allocation of CNSs was found to be more evenly distributed among the traditional roles.

The validity of the CNS titled as an APN is an issue not only in the United States (US), but also in other countries. Authors of articles published in foreign countries defined various roles of the CNS and NP. No consistency was found among these countries regarding role definition, title, or utilization. Frequently, the healthcare industry in foreign countries look to the US for guidance regarding APN role evolution. The variability in scope of practice as well as the lack of common nomenclature has made it difficult to evaluate the roles of APNs.

Objective 2: Competencies.

Operationally defined, competencies are the knowledge, skills, and ability to perform the role. In the literature, many of the NP competencies are considered working within the medical model of healthcare, while the CNS competencies remain in the nursing realm (see Appendix A). This finding adds support for authors that argue against merging the CNS and NP titles. Furthermore, in performing the analysis, this research team found it difficult to ascertain the difference between roles and competencies in some articles; for example, research is a role and coordinating

research is a skill or competency. Therefore, for the purpose of this study, the research team redefined the authors' terms to fit the operational definitions.

Authors were found to have differing viewpoints in regard to their belief that CNS competency can be demonstrated by certification or can be linked directly to the attainment of the CNS title. The suggestion in the literature is that the CNS community needs to develop tools to accurately measure competencies.

The competencies of the CNS are documented in broad terms usually related back to specific roles. Six primary competencies mentioned in the literature are: clinical practice, teaching, assessing patient's health, prescriptive authority for pharmacotherapeutics, communication/interpersonal skills, and marketing. The competency of marketing was primarily related to the ability of the CNS to validate the remaining five competencies within an organization. A strong suggestion throughout the literature is that CNSs must market their competencies or skill set in order to secure the title of CNS in the nursing community. If CNSs do not market their skills well they leave themselves vulnerable to outside influences relative to their role definition. In addition to marketing skills, the various authors state that CNSs demonstrate the ability to develop new competencies such as entrepreneurship to further extend their role within the healthcare system.

Authors of articles written about the Perioperative NP combine competencies of the RNFA and the RN in the perioperative setting, including: the knowledge of aseptic technique, surgical site infection, and surgical instrumentation. Specific skills identified include scrubbing, gowning, draping, prepping, and utilizing surgical instrumentation. Very few authors actually address competencies for the CNS in the perioperative

setting. A particular knowledge needed to work in the perioperative area was not mentioned however themes of leadership, collaboration, consultation, program design, and orientation were noted (see Appendix A).

Objective 3: Educational requirements.

The educational preparation of the CNS was a prominent theme in the literature. In the US, a master's degree is the agreed upon minimum standard. The Netherlands, Australia, and the Nordic countries also require a master's degree as a minimal standard. However, other countries such as the United Kingdom, Ireland, and Hong Kong use the title CNS and do not require a master's degree. Those authors suggested that making the requirement of having a master's degree detracts from the need of being a clinical expert (see Appendix A).

Interestingly, many of the authors of foreign articles used findings in the US to compare or model their educational standards for the CNS. Unfortunately, several authors of US articles described the use of the title CNS without a Master's Degree in Nursing. One author concluded that confusion on educational preparation makes it difficult to track CNSs nationwide (Lyon, 2004). Lack of uniformity in the educational programs is due in part to state regulation of licenses. Some state licensure boards link their requirements not only to certification, but also to an exact curriculum. One state required a master's degree, but not necessarily in nursing, for someone to become a CNS. Articles written about the PCNS noted the requirement of a master's degree; however, no curriculum was described. In addition, articles written about Perioperative NP programs described the RNFA curriculum and certification as a portion of the

program. Proponents of doctorally-prepared nurses as entry level for a CNS exist, but are minimal (see Appendix A).

The concept to merge the educational curriculum of the CNS and NP was apparent throughout the literature. Many authors endorsed reasons to merge and others described the combined CNS/NP educational programs. The proponents of merging the titles argue that there is already similarity of the core curriculum between the CNS/NP programs and a standardized educational curriculum would produce the APN that would be able to fill a variety of roles. This educational track is purported to be cost-effective for universities (see Appendix A).

Although a good number of the articles supported merging the curriculum, there were several authors who opposed merging the titles. Arguments against the merging of the CNS and NP programs include the different approach taken by each APN regarding knowledge application, the loss of the unique contributions of the CNS, and the challenge of encompassing the two specialty tracks content into a normal length master's program. Both sides agree on the need for more research before deciding to blend the academic programs (see Appendix A).

The American Association for Colleges of Nursing (AACN) described what should be in the core APN curriculum including pathophysiology, pharmacology, and health assessment. Additional classes for both CNS and NP curricula contain ethics, health promotions, nursing theory, and research. Varying authors suggested that additional classes for the core curriculum should be leadership, role development, legislative issues, economics, and quality improvement processes. Other factors, noted in the literature, that influence the curriculum development include organizational needs,

society, healthcare reform, and reimbursement requirements. For example, in some states a CNS must have additional educational preparation, for prescriptive authority (see Appendix A).

Documented survey results found that many CNSs expressed inadequate role preparation leading to role confusion in their employment. Practicing CNSs felt the curriculum should be reality-based and contain more case studies, role development, and business management training. One article recommended that CNSs get a separate Master's Degree in Business (Hagopian, Ferszt, Jacobs & McCorkle, 1993).

Objective 4: Utilization.

Numerous articles reviewed by the research team focused on discussion of the CNS and NP outside of the perioperative setting. Very few authors discussed the utilization of the RN, NP, and CNS in the perioperative setting. As previously mentioned, the literature on the RN was only a historical perspective. Findings on the NP in the perioperative setting revealed their primary function as a direct care practitioner. Conversely, the utilization of the CNS, both perioperative and non-perioperative, showed no standardization or consistency.

The ultimate goal of the Federal and State Governments is to ensure safe healthcare delivery to the public. This safe delivery of healthcare is accomplished through management of titling, licensure, and educational requirements of nursing. The literature demonstrated a need for lobbying the Federal and State Governments to advocate for nurses in advanced practice. Issues include modifications to the state Nurse Practice Act for recognition of advanced nurse titling, uniformity in APN requirements, and independent reimbursement by Medicare and Medicaid.

The APN scope of practice is delineated and may differ in the Nurse Practice Act of each respective state. In addition, the inconsistency in titling from state to state lends to role confusion for the CNS. While Nurse Practitioners are recognized as an APN in almost all states, several states fail to recognize the CNS as an APN (see Appendix A). To further this confusion, a few states recognize only the Psychiatric CNS as an APN. In the literature, some states require only advanced certification for the CNS to practice as an APN. Other states require a change in licensure to an Advanced Practice Registered Nurse (APRN) along with certification or portfolio review (see Appendix A).

The review revealed that various healthcare systems that influence the role of the CNS and NP include Health Maintenance Organizations (HMO), collaborating physicians, individual institutions, the practicing individual, and foreign systems of nursing practice. The concept of healthcare reform was a recurrent theme having influenced the fiscal responsibility of organizations that employ APNs. This need for cost-containment has required the CNS to provide proof of their worth through measurable patient outcomes. Some organizations, especially in the rural setting, are looking for the merged CNS/NP to get a wider range of outcomes for less money.

Since conception, the APN has been challenged within the medical community. Some institutions or states require the APN to have a collaborating physician in order to practice, affecting their utilization. Establishing a working relationship and developing the trust needed for this partnership is another burden on the APN.

Ways that organizations choose to employ APNs also affects their utilization. Some institutions support the entire scope of CNS practice allowed by state statutes and regulations, while other institutions restrict the CNS's practice. For example, the

state grants the CNS prescriptive authority; however, the institution may not allow the CNS to prescribe. Additionally, organizations may choose not to employ a CNS due to the inability to bill for services in the same manner as done for other APNs (see Appendix A).

Personal choices by an APN about their scope of practice also affect utilization. The inability to identify the expected role performance of the CNS by the newly hired or the newly graduated often leads to role confusion, either with the practitioner or their administrators, and ultimately results in improper utilization. Marketing is a concept that is seen repeatedly in the literature as a vital need for a CNS. Identification of abilities and role expectations is vital but more important is the marketing of those abilities in an attempt to find the right fit with an organization, thus promoting the most effective outcomes.

The review produced many articles on the APN in other countries. Titling and educational preparation varied, as discussed earlier, and this is also seen with utilization. The US is looked to for guidance when developing APN roles but the inconsistency and confusion is apparent by the multiple names and multiple tasks documented.

Professional organizations such as the American Medical Association (AMA) and American Nurses Association (ANA) have had a great influence on the utilization of the CNS and NP. The AMA is concerned with the independence of APN providers and recommends their practice be collaborative with or supervised by a physician. Collaboration agreements and supervision are agreed upon forms of practice for the NP and the CNS that work within the medical realm providing diagnosis and treatment of

disease (see Appendix A). When CNSs focus their care within the nursing realm, the need for such an arrangement does not exist.

The ANA combined the Council of Primary Healthcare Nurse Practitioners and Council of Clinical Specialists; this action led to an increase in the merging of the CNS/NP educational programs and controversy between the two advanced practices. Following the merger of the councils, the ANA recognized the potential impact of this action and recommended further research be done on the similarities and differences between the CNS and NP (Joel, 1995). The CNS and NP organizations reject the merged practice and endorse a standardized curriculum and tailored core competencies that guide the utilization of each practitioner. These groups also recognize the increase in specialty practice and defer to the specialty organizations for utilization guidance within a specialized area of care.

Objective 5: Professional organizations.

Certification was a recurrent theme in the review of the literature. Confusion of role, education, competency, and utilization has led to inconsistent leveling and certification of the CNS. One survey reported 42 specialties that CNSs are functioning in, yet only 9 CNS specialty exams exist. Nonetheless, repeated requests for specialty advanced practice certification have been made, but the NACNS has advocated for a core certification through the American Nurse Credentialing Center (ANCC) and defers to the specialty organization to develop competencies and examinations for their focused area of care (NACNS, 2004).

The Association of periOperative Registered Nurses (AORN) is the organization that develops the perioperative specialty competencies and certification. Certifications

for the perioperative RN are developed and sponsored by the Competency and Credentialing Institute (CCI) and include Certified Nurse Operating Room (CNOR) and Certified Registered Nurse First Assistant (CRNFA). Currently, no advanced certification for the CNS or NP exists within the perioperative specialty.

Discussion

Major Findings

Objective 1: Role.

The findings of the literature review regarding the role of the Registered Nurse (RN), Nurse Practitioner (NP), and Clinical Nurse Specialist (CNS) in perioperative practice, as anticipated by the research team, were minimal. Advanced Practice Nurses (APNs) in perioperative practice have no clear role definition, with the exception of the Certified Registered Nurse Anesthetist (CRNA), who has a specific role and set of competencies to guide their performance. As indicated by the theoretical model, the role performance of a CNS is affected by both the CNS's personal conception of the role and the role expectations of outside sources such as administrators, physicians, and peers. Clinical Nurse Specialists, specifically those in the perioperative realm, have struggled with role performance due to the inability to effectively define their scope of care or articulate their usefulness to administration. This role ambiguity places the individual CNS in a position where they may have to determine their own role or have the organization determine it for them. Additionally, organizations may question utilization of CNSs and whether they are cost-effective members of the healthcare team.

The broad domains of the CNS allow for them to be dispersed across the continuum of care. Unfortunately, the versatility of the CNS permits organizations to

place the CNS in positions to “fill in the gaps”, disregarding their title and the value of their expertise. Frequently, CNSs are appointed to management or administrative roles, which are roles addressed, but not overly emphasized in CNS curricula, thus leaving individual CNSs feeling unprepared for the role.

Role confusion is further increased by a lack of conformity throughout the 50 states regarding titling and scope of practice of CNSs. This confusion is not inherent to the United States, but also is a problem internationally. Additionally, the full extent of role confusion is difficult to ascertain due to the differences in titling and language regarding the CNS. One thing is certain healthcare reform has and will affect CNSs both internationally and in the US, forcing them to expand their roles and prove their fiscal value.

In contrast, NPs do not have the lack of role clarity inherent to the CNS. Similar to the CRNA, the NP has a specified job description and set of competencies which leads the organization and healthcare team to find validity in their titling and utilization. Family Nurse Practitioners (FNP) find the most acceptance within the healthcare community; however, NPs who expand their practice outside the scope of primary care, such as perioperative NPs, may not receive the same support. Consequently, these perioperative NPs are faced with the same role ambiguity as the CNSs.

Several authors in the literature review discussed a CNS/NP merger, proposing that the two nursing specialties function in the same domains and could be blended to create the super APN. The merger theory was presented as opinion only, and would need scientific studies to add strength to the concept. Throughout the review, the NP and CNS were found to have a distinct separation between title and scope of practice.

The only similarities were in the core curriculum completed by both the NP and CNS.

These similarities were only present in academia and were not evident in practice. The only benefit attached to the merger, would be increased validity of the CNS attributed to the NP title.

The lack of a defined role for the CNS was a saturated topic throughout this literature review. Accomplishing standardization of titling and scope of practice by all 50 states will allow for conformity and uniformity of CNS practice.

Objective 2: Competencies.

Competencies for the CNS, NP, and RN in perioperative practice and the CNS in non-perioperative practice are documented to varying degrees in the literature. The competencies of the RN in the perioperative setting are well defined by the Association of periOperative Registered Nurses (AORN); however, AORN addresses the competencies of the APN in the operating room with no distinction between titles or practice. The perioperative NP demonstrates competencies of the Registered Nurse First Assistant (RNFA), which is primarily that of a perioperative RN, and is not considered advanced practice. Advanced health assessment if applied correctly could be an advanced nursing practice skill; however, health assessment in itself is also within the competency of the RN in perioperative practice. The CNS can obtain competencies that are advanced practice to include invasive procedures; such as chest tubes, central lines, independent wound closure, and simple incision and drainage.

The question remains as to whether competencies are advanced practice nursing or advanced nursing practice. Advanced practice nursing is generally composed of competencies that are inside the nursing realm with prescribing and diagnosing being

the overlap into the medical realm. The competencies of the CNS that can be categorized as advanced practice nursing are primarily in the role of the expert practitioner.

Prescriptive authority was well documented in the literature as a competency of the CNS but varies greatly from state to state. The hard fact remains that the CNS graduate may not be prepared to undertake this competency without additional training beyond the current master's level curriculum. The pharmacological training must be focused in the area of direct patient care with interaction in the CNS's specialty. This competency for the CNS can be quite controversial; however, there is agreement on the need for prescriptive authority of durable medical equipment. Prescriptive authority for equipment lends itself to the ability for third party reimbursement of CNS services. However, do we need pharmacological prescriptive authority? This is still the question and is left to the CNS's specialty area to dictate competency requirements.

The new issue that had a very strong theme in the literature was the competency of marketing. Clinical Nurse Specialists have the requirement and responsibility to market themselves in the changing healthcare arena. The majority of the remaining competencies noted in the literature fall within the traditional roles of the CNS. The direction that CNSs take in relation to competencies should draw them ever closer to the nursing realm. The CNS is first a RN with the majority of the skill sets or competencies being based on nursing theory. The National Association of Clinical Nurse Specialists (NACNS) defines core competencies for the CNS; which are firmly grounded in the nursing realm. The CNS may still cross into the medical realm with a scope of practice that includes prescribing or diagnosing medical conditions. In such

cases, the CNS has an obligation to demonstrate proficiency in these additional competencies. The increase of specialty practices is recognized by NACNS and they recommend that the core competencies be combined with those from specialty organizations to determine practice standards. This decentralization to specialty organizations leads to the confusion of the medical and nursing communities on the competencies of the specialty CNS.

Objective 3: Educational preparation.

Widely accepted in the United States, a CNS should have a Master's Degree in Nursing. However, many registered nurses without a master's degree are calling themselves a clinical nurse specialist because they have worked in a specialty field for many years. While some countries other than the United States limit the title of CNS to someone prepared with the master's degree, many countries do not.

In order to show the importance of the master's degree, differentiation of the impact of educational level on the clinical nurse specialist role must be evident. The master's degree for a CNS must be beneficial to the patient and facility. Research comparing the master's prepared nurse to the non-master's prepared nurse in terms of patient outcomes is lacking in the literature. Obtaining a master's degree demonstrates the commitment of nurses to advancing knowledge in their specialty. With this advanced knowledge, they can understand patients' medical diagnoses from a stronger foundation. Nurses who earn the degree possess critical thinking skills that build on the initial foundations of the bachelor's degree and help to solve advanced problems. These critical thinking skills are required for the advanced practice role.

Debate over the basic core content of the master's degree program for a CNS is minimal; however, there are differences in opinion regarding what the specialty curricula should contain. These differences are usually based on a person's utilization of their role post-graduation and their perceived preparation for their current job. For example, those CNSs that are utilized more in the administrator role see courses in nursing administration and business as valuable.

The authors of this paper believe that the master's degree is the appropriate level of preparation for this advanced practice role. PCNSs should have a Master's Degree in Nursing Science with an emphasis in the CNS role. The core curriculum should remain as reported in the literature: advanced health assessment, pathophysiology, pharmacology, ethics, and roles for the advanced practice nurse. The specialty curriculum needs to include more applicability within the patient care role with use of case studies to demonstrate how they could function. Business and nursing administration should be incorporated into the programs in order to prepare the clinical nurse specialist for their roles as consultant, leader, and change agent. Additionally, the State Boards of Nursing need to recognize only the CNS with a Master's Degree in Nursing and appropriate specialty concentration.

Objective 4: Utilization.

All of the specific objectives of this study: role, educational preparation, competencies, and professional organizations affect the utilization of the CNS. Utilization is not uniform and organizations usually choose the CNS to fill a specific need. In addition, some individuals may have a desire to perform only certain aspects of CNS domains. Other determining factors in CNS utilization include location, State

Boards of Nursing, organizations, facilities, and the individual practitioner. Rural communities desire an APN that can perform at the highest possible level to increase cost-effectiveness. Unfortunately, nursing academia is accommodating and providing a blended CNS/NP that is primarily effective in the roles of the NP. Even though the State Boards of Nursing determine the scope of practice for the CNS, lack of certification has led to varying recognition and hence, varying utilization. Many organizations are not aware of the abilities of the CNS due to the lack of role clarity and effective marketing by the CNS. Therefore, only through proper marketing will a match with the organization's need and the CNS's ability effectively occur. Standardization of the other objectives discussed: role, competencies, education, and professional organizations will lead the State Boards of Nursing to recognize the CNS nationwide and hence allow the uniform utilization of the CNS.

Objective 5: Professional organizations.

Advanced nursing certification is a means to measure the knowledge, skills, and abilities of an individual wishing to enter into advanced practice nursing. The certification of an APN provides validation of competence; however, the State Boards of Nursing often requires certification for licensure and title recognition. Broad level certification is in existence and widely recognized for the Nurse Midwife and CRNA; however, this is not the case for the CNS and NP. The narrowing scope of CNS and NP practices has led to the demand for specialty certification exams; the lack of these exams results in a barrier to practice and ultimately, the public's access to healthcare. A core examination, that measures the professional's competence at entry level for the scope of practice, is essential. The release of the National Council of State Boards of

Nursing 2006 Vision Paper reinforces the need for CNS practitioners to take a stand on their role and position within the Advanced Practice Nursing community (National Council of State Boards of Nursing, 2006).

Limitations

Barriers identified during data analysis included search terms, operational definitions, and the potential for researcher bias. The limited return on articles concerning the perioperative RN, NP, and CNS prompted the research team to analyze the search terms for potential study limitations. The scope of the search terms for perioperative NP and CNS revealed no flaws; however, the team acknowledged the lack of the search phrase “perioperative registered nurse”. The initial assumption was that articles regarding the perioperative RN would be captured with the other search keywords and combinations, yet this was not the case. Due to time limitations, the determination was made to utilize the articles found and supplement information on the perioperative RN with internet publications from AORN.

Several articles operationally defined terms differently than the study. This reinforced the need to clearly define terms and concepts among the research team. Determination was made to add the term “title” to the operational definitions. For the purpose of this study, the authors’ terms were redefined to fit the operational definitions.

To minimize researcher bias and to maintain inter-rater reliability, two members of the research team read each article. The initial reviewer entered a summary of the article into the review summary table; the second reviewer made additions. Different interpretations of unclear terms and concepts (specifically, role and title) led to

confusion among the research team. To ensure capture of all pertinent information, the contribution of both members was reserved.

Lessons Learned

The extensive nature of this systematic review of literature imposed many lessons. In order to minimize the chance of excluding relevant information, an attempt was made to accomplish an exhaustive literature search by using broad search keyword phrases. The result was an abundant amount of literature. Obstacles the research team overcame during the data gathering phase included remote computer access availability, internet technicalities, website availability, and compilation of the master bibliography.

Using remote computer access the research team searched the university's electronic journals; however, delays in data gathering occurred due to the learning resource center having limited site access licenses. Additionally, the center at the University did not subscribe to many journals that were needed for the review. Thus, members had to request interlibrary loans for many articles. Utilizing internet search engines posed further issues. The lack of abstracts associated with web pages demanded that the research team work in pairs to maintain confirmability. In addition, a lack of technical support when setting up a system to search terms and inactive websites led to delays. The research team determined to delete any website that was inactive on second review. In the end, the internet searches revealed minimal information not found by other search engines. The decision was made to maintain the internet bibliography as a supplement.

To maintain accountability for each article, a master bibliography was compiled. Despite training with the reference librarians to perform this task; unforeseen obstacles arose when merging the databases. Each database maintains references in various formats, requiring the research team to add a step for manual deletion of duplicates. Furthermore, articles gathered from internet sources could not be directly imported into the bibliography, necessitating manual entering of the information. To ensure that the data gathering was completed in a systematic manner, every barrier was addressed and overcome; however, each delay added to the research timetable.

The research team underestimated the amount of time and effort for this project. However, the systematic approach to the process encompassed all the relevant literature needed to answer the research question and address the specific aims of the study. Ultimately, the entire research team graduated with a better understanding of their role within the perioperative setting.

Implications and Recommendations for Future Research

Based on the specific objectives outlined within this study, gaps were identified that should lead to further research. It is important that future research be conducted to increase the body of nursing science directed towards the perioperative environment, thereby increasing patient safety and improving outcomes.

The first area for exploration is to determine how many CNSs, as defined by NACNS, are practicing in the perioperative arena. This information will provide a foundation of practicing Perioperative Clinical Nurse Specialists (PCNSs) that should drive future research.

The next area for exploration is the determination of how the identified PCNSs are functioning in the work environment. The stratification of PCNS roles and spheres of influence will increase the link between theoretical and direct patient care outcomes.

Thirdly, one should compare and contrast patient outcomes in facilities that have defined PCNSs with those facilities that have no PCNSs. This information will lend support to the need for perioperative advanced practice certification.

The final area to explore, after clearly defining the PCNS, is to research the blended CNS/NP in perioperative practice. The focus of this research towards patient outcomes, in correlation with the dual versus stand-alone titles, will determine future direction of advanced nursing practice in the perioperative setting.

Conclusion

No substantial evidence supports the specific role of the Perioperative Clinical Nurse Specialist (PCNS); however, the literature is saturated with examples of various other CNS practices and associated positive patient outcomes. The current healthcare climate is ready for the growth and development of the PCNS—giving a much needed dimension of advanced nursing care to the perioperative setting. With this development, a need for scientific research will arise to support evidence-based outcomes in the perioperative arena.

A framework to guide CNS educational curriculum as well as practice is provided by the National Association of Clinical Nurse Specialist (NACNS). A clear role conception for the PCNS can be defined by combining the spheres of influence outlined by NACNS with the Advanced Practice Nursing competency statements provided by the Association of periOperative Registered Nurses. Role conception along with extensive

marketing could allow organizations to visualize the role expectations and provide a foundation for effective role performance and ultimately positive patient outcomes.

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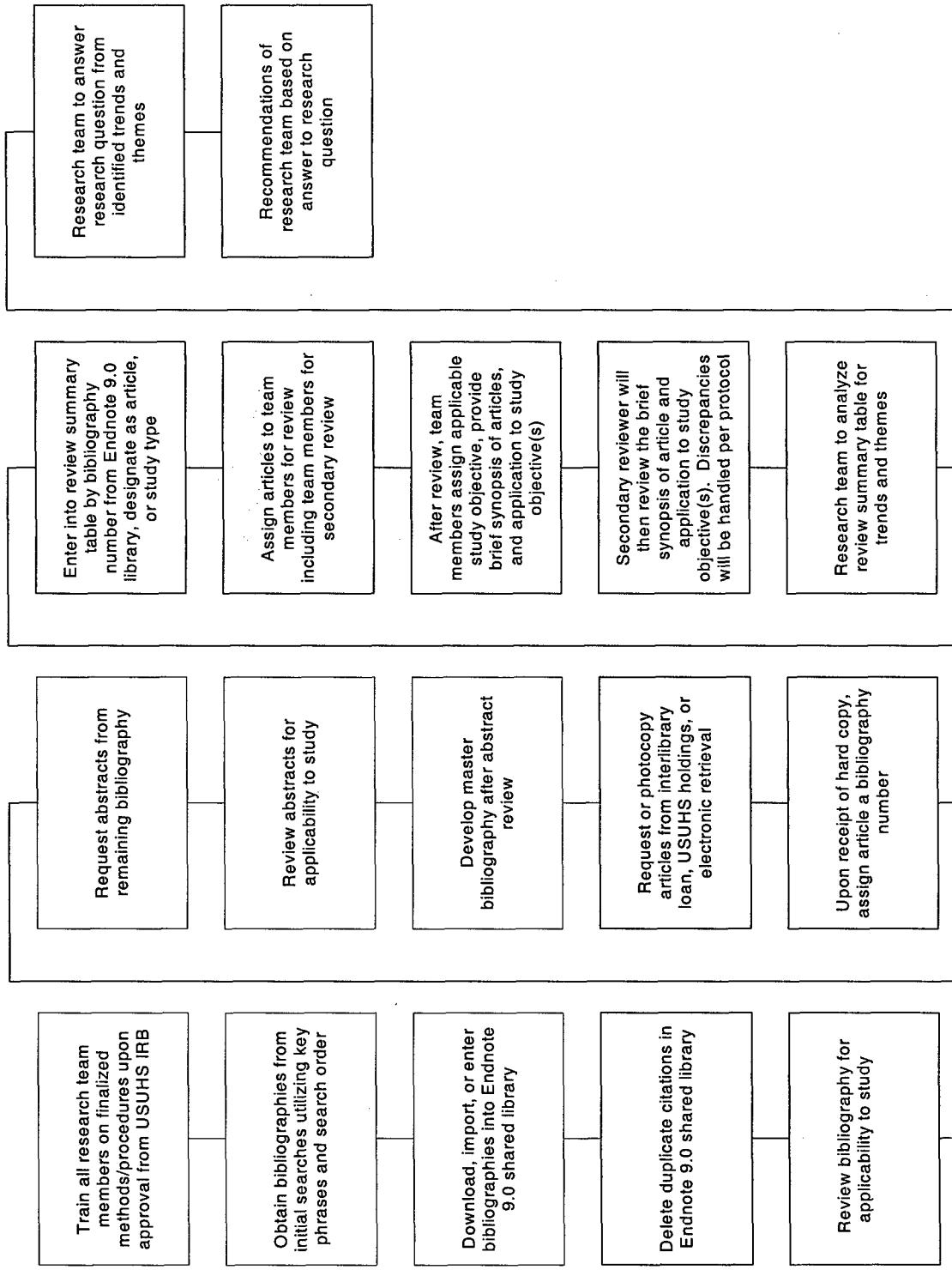
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Figure 1. Theoretical Model: Perioperative Clinical Nurse Specialist Role Development[®].

Figure 2. Research Methods**Table 1****Keyword Phrases**

Designator	Keyword Phrase	Designator	Keyword Phrase
A	Perioperative Clinical Nurse Specialist	L	Responsibilities
B	Clinical Nurse Specialist	M	Job description
C	Nurse Practitioner	N	Position statement
D	Education	O	Federal Healthcare System
E	Certification	P	Health Maintenance Organization
F	Licensure	Q	Military
G	Association of periOperative Registered Nurses+AORN ^a	R	Air Force
H	Certification Board Perioperative Nurses (CBPN)	S	Army
I	Competency and Credentialing Institute (CCI)	T	Navy
J	American Association of Colleges of Nursing (AACN)	U	Public Health Service
K	National Association of Clinical Nurse Specialists (NACNS)		

^aAORN underwent a name change in 1999 and the abbreviation did not change thus it was included in all searches.

Table 2

Keyword Search Strategy

Order	Keyword	Order	Keyword	Order	Keyword	Order	Keyword

1	A	13	AG	25	AK	37	AO	49	AS
2	B	14	BG	26	BK	38	BO	50	BS
3	C	15	CG	27	CK	39	CO	51	CS
4	AD	16	AH	28	AL	40	AP	52	AT
5	BD	17	BH	29	BL	41	BP	53	BT
6	CD	18	CH	30	CL	42	CP	54	CT
7	AE	19	AI	31	AM	43	AQ	55	AU
8	BE	20	BI	32	BM	44	BQ	56	BU
9	CE	21	CI	33	CM	45	CQ	57	CU
10	AF	22	AJ	34	AN	46	AR		
11	BF	23	BJ	35	BN	47	BR		
12	CF	24	CJ	36	CN	48	CR		

Table 3

Inclusion and Exclusion Criteria

INCLUSION	<ul style="list-style-type: none"> ○ All articles discovered through search with keyword phrases in described order ○ Articles revealed in systematic search from countries other than United States
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	<ul style="list-style-type: none">○ Articles published after 1990○ Articles garnered from obtained bibliographies not in originally retrieved bibliography○ Individual articles may be included based on approval of research team
EXCLUSION	<ul style="list-style-type: none">○ Articles in any language other than English○ Individual articles may be excluded based on approval of research team

Table 4

Review Summary Table

Study Author	Bibliography Number	Study Objective Number(s)	Designation	Team Members Assigned to Articles	Brief Synopsis of Article	Implications to Study Objective	Country of Origin
Author	Number Assigned to Article	Objectives as Numbered in Research Proposal	Type of Research Article	Last Name	From Abstract, Overall Content if Not a Research Study, or Methodology, Findings, and Bibliography	What Objectives are Affected and How	
			(Descriptive, Quantitative, etc.)				

Table 5

Search Engine Results

Deletion Process	PubMed	CINAHL
Initial Search	3916	9956
Duplicates Deleted	1734	2491
Articles Ready For Title Review	2182	7465
Total Combined	9647	
Duplicates Deleted	3273	
Deleted By Title	1176	
Deleted By Abstract	4080	
Deleted By Methodology	8529	
Total For Article Review	1118	
Deleted Duplicates And Not Available	259	
Final Bibliography	859	

Table 6***Internet Search Engine Results***

Deletion Process	Metacrawler.com	Mamma.com
Initial Internet Search	1551	3156
Total Deleted By Methodology	1192	2586
Total For Article Review	359	570
Deleted Not Applicable and Not Available	129	N/A
Final Bibliography	230	570

Table 7

Common Themes

Common Themes	
Role	<p>Large number of roles and lack of definition have led to role ambiguity resulting in lack of validation, utilization, and CNS titling:</p> <ul style="list-style-type: none"> • Role can be self-defined or defined by organizations • Traditional 6 roles – educator, researcher, practitioner, consultant, administrator, change agent <p>Basic roles of NP and CNS are similar lending to the push to merge.</p> <p>Other countries define roles differently which leads to utilization and title differences.</p>
Competencies	<p>Competencies of Perioperative NP are directly related to Perioperative RN knowledge.</p> <p>There are multiple CNS competencies noted in the literature:</p> <ul style="list-style-type: none"> • CNS competencies should remain in the Nursing realm • Many competencies are specific to the consultant role <p>Very few competencies are documented for the PCNS.</p>
Educational Preparation	<p>Educational preparation level of CNS overwhelmingly masters prepared or higher and curriculum is not uniform.</p> <p>Merger of CNS and NP roles is linked to similarities of core curriculum:</p>

	<ul style="list-style-type: none"> • Research needs to be done to support educational needs of actual practice • Curriculum has core coursework that is directly linked to State Boards of Nursing Licensure requirements <p>Other countries are comparing the US evolution of CNS and NP curriculum.</p>
Organizations/systems that influence utilization	<p>Boards of Nursing and specialty groups influence utilization of the APN through federal and state legislation.</p> <p>Professional Organizations and Healthcare Systems directly affect APN utilization within their sphere of influence.</p>
Professional organizations that develop/recommend competencies and advanced certification	<p>Development of the specialty CNS and NP certification and competencies by influencing professional organizations is inconsistent.</p>

Appendix A.

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
1	AACN	1	Descriptive	Glover	Walker	1997 - NACNEP conducted review of CNS role, change agent and case manager may be added roles, 63191 as NP only, 53799 CNS only, 7802 NP/CNS, CNS education increase 4.7%, NP education increase 47%. There are more demographics here if we need or want them.	Article shows a decline in the amount of CNSs acquiring education to perform in the role of CNS. NP on the other hand is increasing rapidly. Lack of role definition and the informal use of the title by people and organizations has led to this.	USA
2	AACN	1	Other Documents	Glover	Walker	FOUR sub roles: clinician, researcher, educator, consultant. Impact can only be measured by research.	CNS is hurting themselves by not conducting research to validate their role in the healthcare system	USA
3	AACN	4,5	Other Documents	Glover	Walker	AACN clarified the educational requirement for sitting the certification exam for the critical care specialty	State boards of nursing are directing the focus of the CNS and the certification by accepting or not accepting the certification by AACN to practice in their state	USA
4	AACN	4	Other Documents	Glover	Walker	AMA sent letter to HCFA to clarify the enforcement issue. Recommendation is that reimbursement only be made to those NP and CNS that are collaborative and within the Scope of Practice as defined by the State BON	Doctors and the government are now influencing the utilization of the CNS and NP to limit the practice to the state board of Nursing defined scope of practice.	USA
5	AACN	4,5	Other Documents	Glover	Walker	May 2001, states accepting the CCNS certification as advanced practice is up to 16	AACN certification does not make you able to practice as advanced practice in all but 16 states. SBON still limiting the scope of practice.	USA
6	AACN	5	Other Documents	Glover	Walker	NCSBN accepts and endorses the AACN certification exam for CCNS as advanced practice	The national council has recognized the exam and most SBON should follow to accept as well. This	USA

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
							should open the door to increasing the scope of practice and recognize the CCNS as advanced practice	
7	SON Columbia	1,3	Descriptive	Glover	Walker	Columbia University School of Nursing is changing the curriculum of the CNS and NP to merge closer together	The feeling of the school of nursing managers is that the healthcare system is changing and so they will change their education of nurses. The problem is that this will lead to role confusion and blending of the roles and not the distinction of the separate roles and benefits	USA
8	AACN	5	Other Documents	Glover	Walker	AACN states its position on the certification of advanced practice nurses. Uniformity must be gained to gain power and acceptance.	One uniform advanced practice nursing certification exam and then specific practice exams will lend to the role definition of the advanced practice nurse.	USA
9	ANF	1,4	Other Documents	Glover	Walker	Government recognition of the CNS is now in effect but some hospitals are not recognizing the title	Individual organizations are dictating the practice of the CNS and determining their own scope of practice and not the regulatory body.	Australia
10	ACORN	1,4,5	Other Documents	Glover	Walker	Nurses Board of Victoria announced the acceptance of the NP role in nursing. They can prescribe, order, consult, admit and discharge	This is showing the advance practice role as expanding, but we do not know the educational background of this new role.	Australia
11	California BRN	5	Other Documents	Glover	Walker	California BRN issues certification of CNS. State law requires this certificate to practice as CNS. Maters and experience in the 5 domains is required.	This sets the precedence for the state as to who can call themselves a CNS. This also provides a clear and defined certification for the CNS in the state of California	USA

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
12	California BRN	5	Other Documents	Glover	Walker	NCSBN has introduced the language to regulate the APN by use of the Compact licensing. NCSBN is attempting to recognize all four practice areas. NCSBN is proposing all recognition besides certification be dropped.	same as above This will severely limit the amount of CNS in practice at least in the compact states. There are numerous CNS that are not certified because no exam exists.	USA
19	CNS	5	Other Documents	Glover	Walker	NACNS position paper on the role of the CNS and regulatory credentialing of same. The table shows in picture format a great example of the differences in the CNS and NP practice. Regulatory credentialing necessary and is specialized as an advance practice nurse	The regulation of the field is necessary and will need to be clearly defined to achieve good regulation. Unclear roles will lead to blending and role confusion and credential confusion	USA
20	NACNS	1	Other Documents	Glover	Walker	NACNS regulatory update A CNS is someone who meets the requirements of: a graduate degree, post-masters certificate, 500 minimum clinical practice hours and all other state board of nursing requirements - prescriptive authority is additional	Clear role delineation is necessary and the minimum requirements to obtain the title is a good start.	USA
21	NACNS	1	Other Documents	Glover	Walker		This sets a precedence that the CNS is not advanced practice.	
22	NACNS	1	Other Documents	Glover	Walker	NACNS president presents the above information - no second license is necessary to practice for the CNS	Clarification of the advanced practice nurse is needed and the scope that entails basic and advanced practice is also needed.	USA
23	NACNS	1,4,5	Other	Glover	Walker	Multiple organizations define	Clarification is necessary	USA

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
			Documents			the scope of practice for the CNS. VA allows prescriptive authority and the only half of the specialties in the ABNS have exams to certify. NACNS and NCSBN are in conflict and do not agree on the role and certification of the CNS	as seen that the organization can define the role and the scope of practice. This can be a big legal issue as pertaining to medication prescription.	
26	Canadian Association of Critical Care Nurses	1	Other Documents	Glover	Walker	The Critical Care CNS is a RN with a graduate degree as well as current clinical expertise in critical care	Canada shows that the defined role of the CCCNS is there and they set it out as the minimum to practice	Canada
27		1	Other Documents	Glover	Walker	The European community adopts the language to accept the minimum of specialist nursing education - post basic at an institution of higher learning and assumes adequate clinical practice. Minimum 720 theoretical hours and 50% of the total program dedicated to clinical practice	This sets that the CNS will be at least an advanced practice nurse and will have university education and extensive clinical skills	France
28	Health Care Financing Administration	1,4	Other Documents	Glover	Walker	This states the DHHS will allow the CNS and NP will work in collaboration with a Doctor to provide care.	CNS and NP within the DHHS will be eligible for Medicare reimbursement if following the collaboration rules set forth by DHHS	USA
30	International Council of Nurses	1	Other Documents	Glover	Walker	The International Council of Nurses define the APN as an APN/NP with no mention of the CNS although the education, nature of practice, and regulation are all a blended position	The ICN is setting forth the basis for the extinction of the CNS and the birth of the APN/NP. This body is determining the look of advanced nursing practice in the International community.	Switzerland
32		3,5	Other Documents	Glover	Walker	New jersey requires a MSN for certification as an NP or CNS	Sees the precedence to minimum education to practice	USA
33		3,5	Other Documents	Glover	Walker	CNS is at least a MSN, certification by the ANA	sets minimum to practice	USA
34		3	Other	Glover	Walker	CNS program started at UNLV	Education directed to	USA

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
			Documents			and meets all standards to sit the Acute care or Home care CNS exam	certification and meets requirements to do so.	
36	Registered Nurses Association of British Columbia	1	Other Documents	Glover	Walker	Position Statement on CNS. Masters or higher degree and expertise in a clinical area. Promote research based practice is high goal	defines role and minimum to practice	Canada
37	Oncology Nursing Society	1,4	Other Documents	Glover	Walker	nurse clinician is different from the CNS. Clinician is title given by a hospital to a person. CNS is dictated by the ANA	Clarity is key when discussing roles and this is one example of the blurring of titles.	USA
38	Oregon Nurses Association	1	Other Documents	Glover	Walker	The organization "Oncology Nursing Society" has adopted the term APN for both the CNS and the NP and the differentiation is hard to see.	This organization has adopted the titling on its own and is dictating practice within a field and is blending the role together.	USA
39	American Academy of Pediatrics	1	other Documents	Glover	Walker	Scope of practice for a CNS is defined by Oregon as a Masters in the specialty and a license to practice in Oregon. Certification is optional	This loosens the ability to practice by RN that have a MSN and desire to be called a CNS	USA
41	Pennsylvania Nurse	1,4	Other Documents	Glover	Walker	CNS has a masters and clinical experience to provide care. NP may or may not have masters but has clinical expertise to provide care. Both should be nationally certified.	This lends to the confusion of entry to practice and blending of the identity	USA
42						The CNS in Pennsylvania is recognized by the Insurance law of Pennsylvania but not by the Nurse practice act or Nursing laws. Must be masters and have national certification.	This lends to the confusion of entry to practice and blending of the identity	USA
43						NPs in Scotland can begin to perform minor surgery after completing a six month course to receive credentials.	change in scope of practice	Scotland
44						Specialties are dermatology and plastics.	This lends to the confusion	USA
						Texas Nursing association		

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
			Documents			posed the question to ANA on what is a APN? The ANA held a meeting and still could not reach a consensus. They will revisit in Apr 2005	of entry to practice and blending of the identity	
49	Abdellah, F.	1	Descriptive	Glover	Walker	The NPs can handle 80% of primary care doctor services. CNS provides specialty care. CRNA provide anesthesia care and are sole providers in 49% of hospitals. Midwives provide full maternity care and capable to handle 80% of all deliveries. The hybrid is blending of CNS and NP. CRNA and CMN are clearly defined roles.	clarity needs to happen for the CNS and NP. The trend is to blend together.	USA
52	Aitken, T.	1,4	Descriptive	Glover	Walker	CNS in small setting may not have masters. Experience to fulfill the domains is vital. In the small setting, blended role of CNS and NP is the best.	Blending of the role will provide the financially deficient hospital with a way to get both roles in the facility without having to pay for two people.	USA
53	Alcock, D.	1	Descriptive	Glover	Walker	this study sent out questionnaires to determine the use and roles of the CNS and CNS/NP. The results were that the roles were the same and they functioned very similar with the only difference being in the Direct patient care role and the NP performed the general or primary patient care. CNS/NP will be the highest in demand over the next nine years.	the blended role will provide the ability to get the roles of the CNS and the primary care of the NP in one animal. The problem is then providing time to do it all.	Canada
54	Alvarado, K.	3	Descriptive	Glover	Walker	This article describes the internship program that allows a RN to practice advances skills and theories as an apprentice. Course work towards an advance degree may or may not be in progress	This starts to get the cart ahead of the horse and is teaching the Run to practice before the theory is presented. This can lead to role and identity confusion if the RN finishes	Canada

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
						at the time of the internship.	the internship before the degree is finished. They may think they can do the job and not have the backing to go along with it.	
58	Alvarez, C.	1	Descriptive	Glover	Walker	Role confusion is hindering the ability of the CNS to function and gain validation in the workplace	Role confusion is hindering the ability of the CNS to function and gain validation in the workplace	USA
61	Andersen, M.	1	Descriptive	Glover	Walker	the role of the psych CNS is identified in the activities of the psychotherapist, clinical supervisor, consultant/liaison, educator, and researcher. Masters degree and certification is required to practice.	The state of Minnesota has clearly defined role and practice requirements described for the person inquiring.	USA
62	Anderson, B.	1	Descriptive	Glover	Walker	Masters degree and certification is required to practice.	The state of Massachusetts has clearly defined role and practice requirements described for the person inquiring.	USA
66	Arena, D.	3	Descriptive	Glover	Walker	inadequate role definition is leading to imposter phenomenon and role confusion. The CNS is not prepared for practice.	The fact the CNS is not being prepared in the university setting for the diversity and the possible role confusion is leading to people not being able to function in the CNS job.	USA
67	Armer, J.	1,4	Descriptive	Glover	Walker	Missouri residents support APN is above 75%. APN is NP not CNS	This state is determining the look of the profession and is limiting the support by only presenting the NP	USA
68	Armstrong, P.	1,3,4	Descriptive	Glover	Walker	UK has the five domains but does not require a masters to practice as CNS	This country is varying the education to achieve the same result in the US. There is a big difference though between the CNS and the Nurse specialist	UK
75	Avery, L.			Glover	Walker	AORN is claiming the APN is the NP and the CNS is not talked about at all. Prescriptive	AORN itself is not recognizing the role of the CNS. This is leading to role	USA

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
						authority is paramount on the list of demands. There is not consensus between the ANA and AMA.	exclusion and alienation of the CNS	
77	Bakker, D.	1	Descriptive	Glover	Walker	The CNS must effectively market themselves to prove that they are effective and provide a service to the organization. A clear job description with responsibilities is essential. The CNS must be proactive in showing their worth	Without proper marketing the CNS will be left out of the job market and other professions and possibly NPs will take the job. No jobs equals no certification and so on.	USA
80	Ball, C.	1	Descriptive	Glover	Walker	UK is looking to Australia and the US to help define the role confusion they are experiencing	Role confusion is abundant in all countries and the problem is not getting any better. The organizations are just adding additional roles into the mix as opposed to clearing up the ones they already have.	UK
81	Ball, C.	1	Descriptive	Glover	Walker	Patients are skeptical of the APN but are comfortable with the CNS or the NP. The role confusion is apparent. Marketing is vital and the personal traits of the individual plays a key role.	There is a difference between the advanced practice and customary practice. The APN or NP or CNS must be determined and the role must market themselves to meet the challenges of the workplace.	UK
82	Ball, G.	4	Descriptive	Glover	Walker	the CNS functions as a clinician, educator, researcher, consultant, and executive. These activities may not be familiar to the healthcare administrator that hires the staff. The CNS functions and develops the role that they are in many times. They must show their worth.	Without proper marketing, the CNS will not be utilized effectively or to the best of their potential.	USA
90	Baradell, J.	1	Descriptive	Glover	Walker	CNSs provide care a lower cost than physicians and	Without proper marketing the CNS will be left out of	USA

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
						psychologist, and with equivalent or better outcomes. The problem is that many providers, patients, and hospitals are not familiar with this role.	the job market and other professions and possibly NPs will take the job.	
94	Bear, E.	1	Descriptive	Glover	Walker	The latest challenge to nursing is the definition, role, function, and educational preparation of the APN. Even though ANA stated that a masters is required, many other programs granted advanced practice.		
107	Belcher, A.	1	Descriptive	Glover	Walker	The NP is focused on the direct patient care the skills needed to provide that care. The CNS is focused on the education, consultation and the management of the health system. Not all NP are Master prepared	There is much confusion and clarity is needed.	USA
109	Berger, A.	1	Descriptive	Glover	Walker	The education and certification set for the CRNA, CMN, and NP. This is not set for the CNS, as many do not have certification. There is a proposed consolidation of the APN and the roles would be case manager, clinical educator, clinical researcher, Clinical consultant, nurse practitioner, Corporate/community NP, patient care manager.	Both roles are needed and are separate in scope of practice and focus.	USA
110	Beschle, J.	4	Descriptive	Glover	Walker	The roles used by the APN in surgery is expert and leadership. They are also performing as a RNFA. They are also calling the NP an APN. No mention of the CNS	This new proposal will define and clarify the APN but may also limit and constrain the practice	USA
111	Beuscher, T	1	Descriptive	Glover	Walker	The CNS in Home care is using the domains to provide	The CNS in Home care is using the domains to provide	USA

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
112	Bezyack, M.	1	Descriptive	Glover	Walker	The NP is Masters prepared and is autonomous while practicing under their own license. The CNS is masters prepared and is employed by a hospital. They usually do not have a separate license.	provide quality patient care there are differences and the path you choose should be made on knowledgeable answers to the question of what can I do?	USA
124	Bowey, D.	1,4	Descriptive	Glover	Walker	The laparoscopic nurse practitioner in the UK is not master prepared and is an assistant	this is basically the RNFA	UK
126	Boyce, M.	1,4	Descriptive	Glover	Walker	The CNS in the rural community will have to expand its role to include the generalized direct patient care to provide to the community.	The rural setting is blending the role of the NP and CNS by the nature of economics and workload.	USA
127	Boyd, N.	1	Descriptive	Glover	Walker	The evidence is out there that the CNS is effective in the work that they do and should document and market themselves. The majority of the time a CNS spends in the practitioner role, next is educator.	CNSs have merit and significance in the workplace and need to market themselves to that end.	USA
136	Britton, P.	4	Descriptive	Glover	Walker	CNSs are urged to market their expertise so patients, hospitals, and health authorities can make the best use of them and their abilities.	Without proper marketing the CNS will be left out of the job market and other professions and possibly NPs will take the job.	UK
137	Broussard, B.	1	Descriptive	Glover	Walker	the perinatal CNS is a cost effective expert that must show the effect that they can do in an organization and their expanded role.	Without proper marketing the CNS will be left out of the job market and other professions and possibly NPs will take the job.	USA
141	Buchanan, L.	1	Descriptive	Glover	Walker	The use of the CNS in the home care setting is a new concept to help agencies meet their clinical demands. CNSs are charged to validate their worth and positive impact.	Many CNSs must show their worth to be fully utilized by organizations. Without marketing, the CNS will lose functions and jobs to other providers.	USA
142	Bull, R.	1	Descriptive	Glover	Walker	A survey determined that the	There is much confusion	Australia

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						role ambiguity plays a actor in the effectiveness of the CNS.	Without proper marketing the CNS will be left out of the job market and other professions and possibly NPs will take the job. No jobs equals no certification and so on.	
146	Burgerer, S.	4	Descriptive	Glover	Walker	In the community setting the CNS and the NP are used the same. Primary care givers.	The organization and location is determining the utilization of the APN	USA
152	Busch, A.			Glover	Walker	Oregon is certifying CNS - 2001	Oregon is now recognizing the CNS and is certifying them for advanced practice.	USA
154	Busch, A.	1	Descriptive	Glover	Walker	CNS is not a physician substitute. CNS must promote the role, measure its effectiveness and publish results.	Without proper marketing the CNS will be left out of the job market and other professions and possibly NPs will take the job. Without research the evidence will not be there to support the CNS	USA
155	Busen, N.	1	Descriptive	Glover	Walker	Teaching, counseling, consulting, and research collaboration are role that are similar in the NP and CNS. Physical exams, prescribing, meds, performing and ordering lab tests, prescribing treatments and referrals are the differences	There are similarities and differences. The professions need to be defined and the support of the government and organizations need to be there as well.	USA
156	Caballero, C.	1,4	Descriptive	Glover	Walker	The laparoscopic nurse practitioner in the UK is not master prepared and is an assistant	this is basically the RNFA	UK
157	Caballero, C.	1,4	Descriptive	Glover	Walker	The laparoscopic nurse practitioner in the UK is not master prepared and is an assistant	this is basically the RNFA	UK
158	Cahill, H	1,3	Descriptive	Glover	Walker	no masters and functions more like a surgical tech than a	The differences in the two countries is very apparent	UK

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159	Caldwell, M.	1	Descriptive	Glover	Walker	In 1993 CA performed a study of CNS before adding to the Nurse practice act. Of those claiming CNS, 67% had masters or doctorate. 54% had CNS in job description. 59% are in hospital, 23% in outpatient clinic, 16% academic. Expert, consultant, networking, develops policies, QI, committee member, researcher-role highest to lowest. role confusion with NP, inconsistent education, NP favored, order writing inability, lack of reimbursement, lack of NPA, lack of recognition - barriers to practice highest to lowest	this shows that there is such inconsistency in the role and utilization of the CNS and its interworkings with the NP	USA
160	Callahan, M.	1	Descriptive	Glover	Walker	1996 - NPs are poised to take on the additional role in surgery. They are starting to move into the surgery department and see patients and provide care to assist the surgeons. The additional surgical skills to assist are easily taught. The NP can assess, pre-op, order and prep, teach, assist, post-op manage, teach, and follow-up.	The NP is expanding to the specific patient care and this is aided by the role confusion of the CNS and NP. This is support for the blended role.	USA
162	Cannon, J.	4	Descriptive	Glover	Walker	Louisiana is not utilizing the Masters prepared nurse but is utilizing the experienced nurse and calling them a CNS. The legislature has mandated that CNS will be a masters and the survey was conducted to determine the use. 59% were using Masters prepared	The state is not utilizing the MSN and is instead going with the experience over education theory. Practice is going to change some what and there will still be non masters people that will be used to provide care even though the state is	USA

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163	Canobbio, M.	1,4	Descriptive	Glover	Walker	This hospital allows the CNS to practice independently and provide direct patient care in the adult heart disease patient. CNS is practicing as a practitioner	mandating the MSN.	USA
169	Castledine, G.	1	Descriptive	Walker	Glover	Biddulph, 1976 notes a nurse named Ruth was appointed as a nurse specialist because she was a clinical expert in her field and did not want to become a nursing officer and follow a management career.	The specialist nurse is not there to deskill other nurses, rather to educate and help them in their work with patients. Nurse specialists in particular must continue to work more diligently to educate the Government, the medical profession their general nursing colleagues, the regulator and the public, that the nursing aspects of their role are as crucial if not more important than some of the medical tasks which they undertake.	UK
170	Castledine, G.	1	Descriptive	Walker	Glover	In order for a profession and its specialty subsystems to be empowered, there must be recognized authority, accepted principles and rules of order, adequate comparability and compatibility among the parts, and unity of purpose and standard. Styles, 1989). These essentials were considerably lacking in nursing specialization in the USA, which prevented it from reaching its full potential. It is important to note that the UKCC uses the terms	Confusion is emerging over whether such innovators are either the specialist or advanced practitioners referred to in PREP, or just nurses extending their skills into medical practice. Despite all this, in the USA, the distinction between the clinical nurse specialist and the nurse practitioner is decreasing, with the result that there has been a recent call to integrate the two roles (Kitzman, 1989).	UK

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						specialist nursing practitioner and advanced nursing practitioner to avoid confusion with the variety of titles that have been used previously.	Although this may work in the USA there is still much to be done in this country. We need to be clear about the different types of specialist nurses working in this country. In the past it was argued that a whole host of nurses in different positions and grades met the criteria. The UKCC 1994 now defines the specialist nursing practitioner as someone "...able to demonstrate higher levels of clinical decision making. Able to monitor and improve standards of care through supervision of practice; clinical audit, the provision of skilled professional leadership and the development of practice through research, teaching and the support of professional colleagues."	
171	Cattini, P	1, 2	Descriptive	Walker	Glover	Key roles of the Clinical Nurse Specialist in the UK. To be the acknowledged nurse expert in a specified clinical subject within the trust, to be the major resource in the trust of current research-based practice in their specified subject, to provide professional support and backup to staff and patients in the clinical field in which they are an acknowledged expert, to manage their individual	Competencies are listed for each key role listed. This group would welcome any correspondence from other specialists on the usability of their framework. UK	

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						workload effectively, to be an effective communicator. Given that expert performance may not be captured by the usual criteria for performance evaluation, the CNS has to look at alternative ways of establishing both her expertise and value to the organization.	Author suggests retitling the APN's at this university hospital to CNS, ARNP, Education nurse specialist, research nurse specialist, and informative nurse specialist. The process at this facility included clear identification of major responsibilities of the positions, clarification of role expectations, and concrete evaluation tools.	
175	Chase, L	1	Qualitative	Walker	Glover	Literature review showed the common theme of client-based expert practice in relation to the CNS. 1996 article lists 70% of respondents at masters level, 28% at baccalaureate level, and 2% at the diploma level.	This study found a strong desire among CNSSs to exercise greater professional autonomy in their practice. Similar expectations were found among their nursing colleagues. "As in the US and UK the psychiatric CNSSs in Hong Kong need to have advanced graduate education and be certified by recognized professional bodies, making them distinct from other clinical nurse colleagues and empowering them as leaders of the nursing profession"	
177	Chein, Wai-Tong	1	Quantitative	Walker	Glover			Hong Kong

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179	Christensen, J	1,	Editorial	Walker	Glover	The author suggests that all advanced practice nurses should: be guided by a nursing philosophy and nursing values, has knowledge and skills within the total area of nurse work as required for registration, hold a position within nursing which has a scope of practice with a range of knowledge and skills clearly differentiated from those associated with "first level" practice, have increased knowledge and skills within the particular scope of practice acquired through a masters level program as well as ongoing informal and formal learning experiences, always function within a nursing framework, demonstrate clinical scholarship, demonstrate clinical leadership, demonstrate critical analysis of complex human health circumstances, foster interdisciplinary collaboration, and be able to describe nursing's specific contribution to health care to others	New Zealand	In Hong Kong the term for CNS is NS it is unclear on Masters level education
180	Chuk P. Kai Cheung	1	Descriptive	Walker	Glover	Expert nursing practice in delivering patient care has been developed in countries such as Australia, the United States, and United Kingdom where the term CNSs for	New Zealand	Hong Kong

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						nurses with such practice is documented in the literature. In Hong Kong, this practice has been implemented by nurse specialists (NSs) with the role introduced in 1993 as a pilot scheme in several large public hospitals and assigned to 12 different clinical areas including accident and emergency nursing, coronary care, renal care, diabetes care and hospice care, etc (Tang, 1993). At present, NSs are recognized by the hospital authority of Hong Kong as a new career ladder for the professional development of Rns.		
183	Clark, A.	1,4,5	Descriptive	Glover	Walker	State Board of Nursing in Texas is thinking about limiting the number of CNS and NP certification exams	Limitations of the number of exams will in turn limit the practice as an APN	USA
186	Cohen, S	1	Qualitative	Walker	Glover	A reversal occurred in this trend, evidenced by a steady growth in demand for these advanced practice nurses by organizations seeking to improve patients' outcomes while remaining fiscally responsible. This led to changes in role expectations and expanded responsibilities to a system-wide level. The synergy model describes 8 characteristics of nurses (clinical judgment, clinical inquiry, facilitator of learning, collaborations, systems thinking, advocacy/moral agency, caring practices, and response to diversity), and	The article discusses the use of the Synergy model to accurately describe the transition from the traditional unit-based practice of CNSSs to a contemporary multi-system practice. The key that was found in the study was to communicate and collaborate with each other to influence practice.	USA

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187	Cole, F					three spheres of influence (patient/family, Nurse-nurse, and system). The presence of a clinical expert, who is not in a management capacity, encourages open discussion and curiosity by professional staff related to evidence-based practice and new trends in patients' care.	The clinical nurse specialist and the NP are employed in emergency departments across the country, but educational preparation, state requirements for practice and recognition, certifying bodies, and experience levels vary tremendously. The absence of a national scope and standards of practice specific to the CNS role in emergency care settings contributes to a lack of clarity and recognition for this role, while the recent publication of a national scope and standards of practice for NPs in emergency care settings has clarified their role. The literature on CNSs who practice in emergency care settings -- particularly their demographic characteristics -- is virtually nonexistent. The CNSs who responded to our survey were certified predominantly as critical care or medical-surgical CNSs. No certification as an emergency CNS is available.	Good article listing the demographics of CNSs in emergency care. Most important no certification or truly defined role.
189	Collins, C					1 Descriptive	Walker Glover	CNP in UK appears to function like a normal RN

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190	Collins, E					nurse was appointed to help develop the role, given the increasing opportunities vested in nurse by UKCC and define the boundaries of legality enshrined in the Medicines Act and the Ionizing Radiation Regulations. The duties, relationships, responsibilities and problems have not been determined. What the CNP can do: routine hard work, pre-operative assessment clinics, minor operative procedures, eg suturing of skin wounds, obtaining consent for operation or procedure. What they can not do: Certify death, prescribe drugs to take home, initiate prescriptions, initiate radio diagnostic tests.	In the US with the added ability to do consents and H & P's	
						Robichaud and Hamric (1986) suggested six major roles for the CNS: patient care, education, consultation, research, administration, and professional development. A survey of 81 institutions and administrators reported that the ideal time a CNS should spend on research activities is 15% (Walker, 1985). The DNP must maintain an active practice base. The CNS would identify problems associated with a group of patients and/or the problems with health care delivery to this population and design clinical trials, if warranted, to solve clinical problems.	This paper proposes that a CNS, prepared at the doctoral level, may be the more appropriate solution. Because CNSs maintain a strong practice base, they directly observe problems in the practice setting. With the appropriate research preparation, doctorally prepared CNSs can be in a position to solve clinical problems and advance the science of nursing.	USA

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191	Collura, D	Government Documents	4	Walker	Glover	Minimal qualifications include licensure as a registered nurse and a graduate degree with a major concentration in a specialized advanced nursing practice are. Performing acts of diagnosis and treatment which may include: prescribing, administering or dispensing therapeutic measures. The CNS Executive Board, mindful of this recommendation, reviewed the statutes operant in other states, and found the CNS component as varied as the state in which the nurse resides	CNS scope of practice in Nebraska	USA
196	Cosentino, B	1	Editorial	Walker	Glover	There is a growing demand for CNSSs and suggests that there will be a need-driven trend for APNs to move back into the educator role. We have seen many CNSSs who return to school to become NPs, but who continue to stay in the CNS role until they can find positions that meet their practice and salary requirements	Both NPs and CNSSs provide health assessment, diagnosis, prevention and management of health problems	USA
197	Cowan, S	1, 4	Descriptive	Walker	Glover	States there is a difference between collegiality and collaboration. Utilizes the term Steady-State Workers. It defines them as permanent specialty assignments, authority to make work-related decisions, precise job descriptions, job security, good benefits, emphasis on quality care, patient service, feedback	Primary information in this article is focusing on well defined boundaries and strong job description	USA

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198	Cox, c	Other Documents	1	Walker	Glover	In England there are no universal definitions for the roles of clinical nurse specialists/nurse practitioners (CNSs/NPs). There are also no universal standards for the educational preparations of CNSs/NPs participating in this study, is an area that requires clarification. The CNS/NP enhances clinical effectiveness by "smoothing the way forward" is a central theme in enhancing clinical effectiveness. It describes how the CNSs/NPs manage everyday problems which may or may not be related to their clinical field. Smoothing the way forward is a theme that acts as an umbrella for the following area: negotiating clinical decisions with members of the multidisciplinary team; and educating and guiding junior colleagues. The CNS is the	Recommendation from the study: Undertaking a comprehensive review of all CNSs/NPs' job descriptions. This should be undertaken collaboratively with the CNSs/NPs so that there can be a consensus regarding their main duties and key tasks. Elimination of the barriers to clinically effective care in order that aspects of advanced practice such as the assumption of physical assessment skills and diagnosis can be taken up. This could be achieved if role clarification occurred. Provision of clinical supervision to all CNSs/NPs. This is essential for the development of practice. Regular audits and evaluations of practice	UK

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201	Cronenwett, L.					walking talking resource center. Disorganization is the central theme in creating barriers to clinical effectiveness. Disorganization can be seen in ; role fragmentation; and role confusion.	should occur. Masters degree level of practice should be encouraged. In house training should be offered as a mechanism for developing clinical skills	
204	Cukr, P.	1,3,5	Descriptive	Glover	Walker	multiple education programs, multiple certification programs, multiple titles. Inconsistent titling and licensing	Education and legality must be consistent and uniform for the profession to achieve recognition, respect, and utilization	USA
205	Cukr, P.	1	Descriptive	Glover	Walker	NP generalist direct pat care, CNS specialized pat care.	The differences are there if the utilization is maintained that way. Blurring will blur the role	USA
205	Cukr, P.	1,4	Descriptive	Glover	Walker	The CNS provides psychotherapy, and NP provide medical therapy	The CNS/NP is the best for the mental health realm to provide total care by one person.	USA
206	Cunningham, M.					Memorial Sloan Kettering Cancer Center hired two CNSS to start PCNS program. The two master prepared nurses make rounds in the OR and PACU every two hours to report to the families.	The utilization of two master prepared nurses to communicate to the families has worked for this hospital, but limits the scope of practice to only one domain.	USA
205	Cutts, B	1	Descriptive	Walker	Glover	Nursing continues to be defined by others, particularly the medical profession. Nurses have reinforced this view by continuing to attach more importance to technical and quasi-medical procedures, such as the administration of IV drugs, rather than the uniqueness of their own practice. It has been argued that the development of the CNS has allowed nursing to divorce itself from traditional hierarchies. Dowling (1997)	For nurses to achieve autonomy they need to develop a role that is independent of medicine and firmly based in nursing theory.	UK

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						found that professional boundaries were becoming blurred where nurses undertook purely medical tasks and had no nursing duties. This leads to a paradox whereby CNSs have greater knowledge but this is limited to one area of clinical practice and may cause the concept of holistic nursing to be lost.		
212	Daly, W.	1	Descriptive	Glover	Walker	The UK is attempting to standardize the role and education and practice of the country. The novice to expert model and the US is being talked about to determine the progression.	The country has determined that it is necessary to determine what is what level and who is performing at that level. Consistency is the key	UK
213	Davidson, S	1, 4	Other Documents	Walker	Glover	1998 vision of NACNS: Focus 1, Provide professional development for CNSs. 2, Increase our individual and corporate membership, 3 Heighten the visibility of CNS through dissemination of the NACNS statement, 4 Strengthen the financial base of NACNS through corporate membership	NACNS is to have continued exploration of portfolios as an alternative for those CNSs who have no certification examination by talking with the International Society of Nurses in Genetics who has spearheaded this approach for advanced practice nurses	USA
216	Davidson, S	1, 4	Other Documents	Walker	Glover	CNSs had aligned themselves with the view that advanced practice should not be	Legislative involvement by national NACNS organization	USA
217	Davidson, S	1, 4	Government Documents	Walker	Glover	CNSs had aligned themselves with the view that advanced practice should not be	This article describes the experience of CNSs in Oregon who achieved a	USA

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						regulated within boards of nursing because it would limit expansion of the practice. With downsizing and reorganizing in many hospitals during the 1990s, many CNSs were shifted from their positions and refilled. These factors led to the realization that one major advantage of regulation would be title protection. On the national level, the locus of recognition for any advanced practice role had moved to boards of nursing. Also, during this period, the Oregon Board of Nursing (OBON) made the decision to drop the requirement for national certification to practice as an NP or a nurse midwife, hence recognition as a CNS in the state of Oregon (when it did occur) meant state certification to practice. This certifications did not require an examination but did involve board review of transcripts, the educational program of the applicant, and practice hours in the past 5 years. The CNS independently provides advanced theory and research-based care to clients and facilitates attainment of health goals. Within the practice of advanced nursing, the CNS provides innovation in nursing practice, based upon clinical expertise, evidence-based decision making, and leadership skills. The CNS	statutory and regulatory recognition of their practice	

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218	Davies, B.	1	Descriptive	Glover	Walker	Study shows that the CNS is performing in all 5 domains. Small sample size n=27. Majority are masters prepared	the role of the CNS is consistent with other studies and Canada is utilizing the CNS as in the US	Canada
219	Davies, B.	1,3	Descriptive	Glover	Walker	APN is the CNS and the NP. Utilization of the domains to provide quality Patient care. Educational program are incorporating NP and CNS blended teaching to Create the APN	The blended role is being taught in the British Columbia schools and the utilization of the blended role will continue if that is all that is being created. This will force the Np and CNS only to catch up to the new look of practice. Organization will also comply and the legislation will come around as well.	Canada
220	Davis, B.	3	Descriptive	Glover	Walker	education and advancement in the profession is measured by CEU and classes in Wales and not programs. The Basic RN will progress to the next level by taking individual classes not an entire program of study as in the US	The differences in the education across Europe will only lead to confusion in the role and expectation of the nurse. Consistent education programs and role definition will correct this problem.	Wales
227	Deane, K.	1	Descriptive	Glover	Walker	Merger of the NP and CNS is unite the profession and create a stronger role	unified support needs to be given no matter what levels are decided upon. Nursing needs to just decide and go on. The muddying of the waters is hurting the profession	Canada
228	DeBourgh, G.	1	Descriptive	Glover	Walker	The APN will forge the future with evidence -based practice and utilize all domains to provide quality care	The merged role of the CNS/NP will provide the consistency in the profession to clarify the role. Research is the key to USA	USA

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231	Denham, G.	4	Editorial	Newkirk	Cole	The author emphasizes the possible underutilization of the role of the Advanced Practice Psychiatric Nurse due to limited recognition by licensing bodies and insurance agencies. She lists ways to increase the utilization through marketing, graduate student recruitment, etc.	advancing not only care but the profession as well.	
231	Denham, G.	1	Descriptive	Glover	Walker	Barriers such as underutilization and lack of reimbursement unnecessarily restrict the provision of care to the patient. Lack of recognition of the psych CNS by other providers, hospitals, policy makers could be directly related to the low numbers of CNSs in practice.	The CNS must get out and promote their worth to the whole healthcare community to then stabilize the job that they are in and possibly expand the role and function they can provide.	USA
235	Ditzenberger, G.	1	Descriptive	Glover	Walker	The NP and CNS are providing the same care, combine the role and have only one.	The specialization of certain practice areas lends to the blending of role by the NP and CNS. If both are providing the same care and only word the descriptions differently, then combine the role and have only one.	USA
239	Dufield, C.			Glover	Walker	CNS in New South Wales is RN with 12 months experience and an appropriate post-registration qualification or 4 years experience	Varied and inconsistent requirements of education and experience is leading to the role confusion and varied utilization	Australia
240	Duffield, C.	1, 2	Qualitative	Walker	Glover	Two new titles were introduced into New South Wales they are the Clinical Nurse Specialist and nursing unit manager both introduced in 1986. The introduction of the two roles	Primary focus was CNS must focus on becoming clinical experts compared to the nursing unit manager	Australia

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241	Duffield, C					resulted in some confusion as to who was primarily responsible for the production of a quality product, patient care. The competencies that have the potential to affect the provision of quality care were extricated in this article. The CNS was more concerned with acting as liaison between doctor, patient, family and staff, informing staff of changes to patients, acting as patient advocate, and teaching patients and family.		
						There is an unfortunate lack of reliable data about the cost effectiveness of CNSs which contributes to the uncertainty within the profession about the viability of this role. In the US CNSs find themselves moved from clinical to administrative roles. The term CNS has proved confusing, because of significant differences between this role overseas and that of NSW. In the US the roles include: practitioner, teacher, consultant, researcher, change agent, clinical leader, and manger. In NSW they are: resource person, consultant, change agent, coordinator, rehabilitator, teacher, assessor, planner, implementor, and evaluator. In North America the SNS is senior in the clinical pathway. Currently this position closely resembles that of the CNC in the US	There appears to be no clear educational guidelines for the CNS in NSW. The role is confused in NSW as it is in the US	Australia

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201	Cronenwett, L.	1,3,5	Descriptive	Glover	Walker	multiple education programs, multiple certification programs, multiple titles. Inconsistent titling and licensing	Education and legality must be consistent and uniform for the profession to achieve recognition, respect, and utilization	USA
204	Cukr, P.	1	Descriptive	Glover	Walker	NP generalist direct pat care, CNS specialized pat care.	The differences are there if the utilization is maintained that way. Blurring will blur the role	USA
205	Cukr, P.	1,4	Descriptive	Glover	Walker	The CNS provides psychotherapy, and NP provide medical therapy	The CNS/NP is the best for the mental health realm to provide total care by one person.	USA
206	Cunningham, M.	4	Descriptive	Glover	Walker	Memorial Sloan Kettering Cancer Center hired two CNSS to start PCNS program. The two master prepared nurses make rounds in the OR and PACU every two hours to report to the families.	The utilization of two master prepared nurses to communicate to the families has worked for this hospital, but limits the scope of practice to only one domain.	USA
205	Cuits, B	1	Descriptive	Walker	Glover	Nursing continues to be defined by others, particularly the medical profession.	For nurses to achieve autonomy they need to develop a role that is	UK

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						Nurses have reinforced this view by continuing to attach more importance to technical and quasi-medical procedures, such as the administration of IV drugs, rather than the uniqueness of their own practice. It has been argued that the development of the CNS has allowed nursing to divorce itself from traditional hierarchies. Dowling (1997) found that professional boundaries were becoming blurred where nurses undertook purely medical tasks and had no nursing duties. This leads to a paradox whereby CNSs have greater knowledge but this is limited to one area of clinical practice and may cause the concept of holistic nursing to be lost.	independent of medicine and firmly based in nursing theory.	
212	Daly, W.	1	Descriptive	Glover	Walker	The UK is attempting to standardize the role and education and practice of the country. The novice to expert model and the US is being talked about to determine the progression.	The country has determined that it is necessary to determine what is what level and who is performing at that level. Consistency is the key	UK
213	Davidson, S	1, 4	Other Documents	Walker	Glover	1998 vision of NACNS: Focus 1, Provide professional development for CNSs. 2, Increase our individual and corporate membership, 3 Heighten the visibility of CNS through dissemination of the NACNS statement, 4 Strengthen the financial base of NACNS through corporate membership	National organization specific for CNS	USA

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216	Davidson, S	1, 4	Other Documents	Walker	Glover	NACNS is to have continued exploration of portfolios as an alternative for those CNSSs who have no certification examination by talking with the International Society of Nurses in Genetics who has spearheaded this approach for advanced practice nurses	Legislative involvement by national NACNS organization	USA
217	Davidson, S	1, 4	Government Documents	Walker	Glover	CNSSs had aligned themselves with the view that advanced practice should not be regulated within boards of nursing because it would limit expansion of their practice. With downsizing and reorganizing in many hospitals during the 1990s, many CNSSs were shifted from their positions and retitled. These factors led to the realization that one major advantage of regulation would be title protection. On the national level, the locus of recognition for any advanced practice role had moved to boards of nursing. Also, during this period, the Oregon Board of Nursing (OBON) made the decision to drop the requirement for national certification to practice as an NP or a nurse midwife, hence recognition as a CNS in the state of Oregon (when it did occur) meant state certification to practice. This certifications did not require an examination but did involve board review of transcripts, the educational program of the applicant, and	This article describes the experience of CNSSs in Oregon who achieved a statutory and regulatory recognition of their practice	USA

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						practice hours in the past 5 years. The CNS independently provides advanced care to clients and facilitates attainment of health goals. Within the practice of advanced nursing, the CNS provides innovation in nursing practice, based upon clinical expertise, evidence-based decision making, and leadership skills. The CNS practices within 3 spheres of influence: Individual clients and populations; nurses and other multidisciplinary team members; and organizations.	the role of the CNS is consistent with other studies and Canada is utilizing the CNS as in the US	Canada
218	Davies, B.	1	Descriptive	Glover	Walker	Study shows that the CNS is performing in all 5 domains. Small sample size n=27. Majority are masters prepared	The blended role is being taught in the British Columbia schools and the utilization of the blended role will continue if that is all that is being created. This will force the NP and CNS only to catch up to the new look of practice. Organization will also comply and the legislation will come around as well.	Canada
219	Davies, B.	1,3	Descriptive	Glover	Walker	APN is the CNS and the NP. Utilization of the domains to provide quality Patient care. Educational program are incorporating NP and CNS blended teaching to Create the APN	education and advancement in the profession is measured by CEU and classes in Wales and not programs. The Basic RN will progress to the next level by taking individual classes not an entire program of study as in the US	Wales
220	Davis, B.	3	Descriptive	Glover	Walker	The differences in the education across Europe will only lead to confusion in the role and expectation of the nurse. Consistent education programs and role definition will correct this problem.		

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227	Deane, K.	1	Descriptive	Glover	Walker	<p>Merger of the NP and CNS is unite the profession and create a stronger role</p>	<p>unified support needs to be given no matter what levels are decided upon. Nursing needs to just decide and go on. The muddying of the waters is hurting the profession</p>	Canada
228	DeBourgh, G.	1	Descriptive	Glover	Walker	<p>The APN will forge the future with evidence -based practice and utilize all domains to provide quality care</p>	<p>The merged role of the CNS/NP will provide the consistency in the profession to clarify the role. Research is the key to advancing not only care but the profession as well.</p>	USA
231	Denham, G.	4	Editorial	Newkirk	Cole	<p>The author emphasizes the possible underutilization of the role of the Advanced Practice Psychiatric Nurse due to limited recognition by licensing bodies and insurance agencies. She lists ways to increase the utilization through marketing, graduate student recruitment, etc.</p>	<p>Barriers to practice by influencing organizations.</p>	USA
231	Denham, G.	1	Descriptive	Glover	Walker	<p>Barriers such as underutilization and lack of reimbursement unnecessarily restrict the provision of care to the patient. Lack of recognition of the psych CNS by other providers, hospitals, policy makers could be directly related to the low numbers of CNSs in practice.</p>	<p>The CNS must get out and promote their worth to the whole healthcare community to then stabilize the job that they are in and possibly expand the role and function they can provide.</p>	USA
235	Ditzemberger, G.	1	Descriptive	Glover	Walker	<p>The NP and CNS are providing the same care, combine the role and have only one.</p>	<p>The specialization of certain practice areas lends to the blending of role by the NP and CNS. If both are providing the same care and only word the descriptions differently, then combine the role and</p>	USA

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239	Dufield, C.		Glover	Walker		CNS in New South Wales is RN with 12 months experience and an appropriate post-registration qualification or 4 years experience	Varied and inconsistent requirements of education and experience is leading to the role confusion and varied utilization	Australia	
240	Duffield, C.		1, 2	Qualitative	Walker	Glover	Two new titles were introduced into New South Wales they are the Clinical Nurse Specialist and nursing unit manager both introduced in 1986. The introduction of the two roles resulted in some confusion as to who was primarily responsible for the production of a quality product, patient care. The competencies that have the potential to affect the provision of quality care were extricated in this article. The CNS was more concerned with acting as liaison between doctor, patient, family and staff, informing staff of changes to patients, acting as patient advocate, and teaching patients and family.	Primary focus was CNS must focus on becoming clinical experts compared to the nursing unit manager	Australia
241	Duffield, C		1	Descriptive	Walker	Glover	There is an unfortunate lack of reliable data about the cost effectiveness of CNSs which contributes to the uncertainty within the profession about the viability of this role. In the US CNSs find themselves moved from clinical to administrative roles. The term CNS has proved confusing, because of significant differences between this role overseas and that of NSW. In the US the roles include: practitioner, teacher,	There appears to be no clear educational guidelines for the CNS in NSW. The role is confused in NSW as it is in the US	Australia

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289	Fulton, J	1	Editorial	Walker	Glover	consultant, researcher, change agent, clinical leader, and manager. In NSW they are: resource person, consultant, change agent, coordinator, rehabilitator, teacher, assessor, planner, implementor, and evaluator. In North America the SNS is senior in the clinical pathway. Currently this position closely resembles that of the CNC in NSW. The CNS must have 5 years of post-basic experience. CNS = Clinical Nurse Consultant. No evidence in the literature shows a profile of the CNS in NSW prior to this study. Prior to 1985 in NSW there were very few opportunities to obtain undergraduate nursing degrees. Years of experience do not of themselves create expertise. In NSW educationally the CNS is not well qualifies. As with nurse managers most CNSs have not completed, nor are they undertaking, study in higher education.	CNSs are clinical experts in the diagnosis and treatment of illness and the delivery of evidence-based nursing interventions, possess advanced knowledge of the science of nursing along with a specialty focus, and apply that knowledge to nursing assessments, diagnoses, and interventions and to the design	CNS domains and competencies remain the nursing realm. The CNS must be generic with nursing specialization.	USA

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						<p>of innovations for clients with similar special needs. Specialization is built on the generalist practice foundations of baccalaureat nursing education. CNS specialty practice results when a nurse moves from the generalist focus of an undergraduate degree to an advanced-level nursing graduate degree with a specialty focus. CNS specialization ensures that a portion of the profession has in-depth knowledge and advanced competencies about emerging and narrow health concerns. Generalist preparation cannot adequately address specialty competencies; thus a smaller group of advanced practice specialists, CNSs provide the knowledge and competencies to both deliver and direct care to clients and to translate nursing phenomena to concern into specialty interests. State nurse practice acts grant nurses an independent and autonomous scope of practice that differentiates the practice of registered nursing from the practice of other licensed health professions such as physician, physical therapist, and pharmacist</p>	<p>Article lists three spheres of influence. The patient/client, nurses and nursing practice, and systems and</p>	Simply lists the three spheres that can relate to roles	USA
290	Fulton J	1	Descriptive	Walker	Glover				

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291	Fulton J	1, 4	Descriptive	Walker	Glover	The link to role is through the need of specialization. The organizational effects are related to state nurse practice acts.	USA	
292	Fulton, J	1	Descriptive	Walker	Glover	Building evidence based practice is of the utmost importance	2004 bibliography of CNS practice and outcomes	USA
294	Gail, C	1	Descriptive	Walker	Glover	CNS and NP have core and specific skill sets that compliment each other when used together	CNS as ID and IC. Importance here is the fact that the article discusses utilizing the two roles as separate people but together rather than blending roles	USA
299	Geiger-Bronsky, M	1, 4	Descriptive	Walker	Glover	Job descriptions are inconsistent. The same hospital had CNSs with different job descriptions and utilized in different ways. CNS need to clarify role essentially designed product line for CNS. The CNS must also employ marketing plans and strategies	CNS role includes marketing the role along with the traditional spheres. The major problem with role ambiguity seems to be that they are not immune to the personal forces of resistance	USA
301	Gerard, P	3, 5	Descriptive	Walker	Glover	There are significant differences between CNS college programs including hours and clinical hours.	NACNS has developed standards for CNS education	USA
302	Gerard, P	3, 5	Descriptive	Walker	Glover	CNS programs recognized by NACNS are listed from throughout US	Article speaks to higher education and professional organizations that influence specifically NACNS	USA
303	Gerard, P	5	Descriptive	Walker	Glover	The rationale for not endorsing the document is because the document	NACNS refuses to support the NONPF related to the	USA

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						contains criteria for Clinical Nurse Specialist education/curricular review. Our position is that CNS education and curriculum are the purview of CNS faculty and the program review should be conducted by individuals who are CNSSs.	blurring of roles and need to apply both organizations standards	
307	Gibson, F	1	Descriptive	Walker	Glover	Compares and contrasts role development in the US and UK. The ANA selected the title of advanced practice nurse in 1977 but because the specialty groups did not wish to lose their identity, they continue to use their previously designated names.	Description of role development of advanced clinical practice in the UK	UK
308	Gibson, F	1	Qualitative	Walker	Glover	Focus groups to investigate the development of clinical nurse specialist roles. Discusses role components; experience versus education; supportive strategies; personal qualities; future role development and development strategies. Lack of clarity regarding the CNS role was acknowledged by the UKCCC in 1997. "I mean purely having a masters degree does not make you a clinical nurse specialist at all, but it might help you. I'm just concerned that we would come to rely on, you've got you masters therefore you're a specialist.	Themes and trends are analyzed. Role components, supportive strategies, personal qualities, future role development. Variations have occurred as a result of the ad hoc development of the role of the CNS. Clear role definition and inconsistent use of the CNS title. Such role ambiguity may serve to inhibit the future development of the CNS role, and may lead to a lack of job satisfaction, demotivation and prevent goal attainment	UK
312	Gilliland, Kathy	1	Descriptive	Walker	Glover	Successful role implementation and job satisfaction among CNSSs and other nurses in expanded roles are directly related to the	Limited time and other clinical factors may keep the CNS from defining the role	USA

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						amount of support the independent practitioner receives in the employment environment. There is limited time for role development and problem solving. Leaving the CNS without a system of social and professional support		
314	Giuliano, KK	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	Competencies listed: good interpersonal skills, ability to work effectively in teams, ability to successfully lead teams, expertise in project management, effective resource utilization, expert knowledge of scientific literature pertinent to one's clinical practice. A CNS became a business development specialist where she uses her expert practitioner role. She also leads teams in project development. A Cardiology NP which once was a CNS for 8 years finds that she relies on many of her fundamental roles and competencies as a CNS are useful in her new role.	Roles and competencies of the CNS are discussed.	USA
315	Glen, S	1	Descriptive	Walker	Glover	UKCC 1994 defines a CNS as a practitioner who exercises higher levels of judgment and discretion in clinical care in order to function as a specialist nursing practitioner. Utilized Nicholson's model of work-role transitions. CNS's felt that the ability to practice autonomously was an important aspect of their role.	Relations to role include, role conflict, role ambiguity, role overload, role under load, role complexity, and occupying a boundary role	UK
317	Gray, M	1,3	Descriptive	Walker	Glover	Literature review that lists first graduate		USA

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						summarizes current definitions of specialty and advanced practice. Expert nursing practice is a hybrid of practical and theoretic knowledge that evolves over time and as a result of ongoing education combined with clinical experience	curriculum at Rutgers University in 1954. CNSSs are the largest single group of APNs	
319	Grindel, C	1,4	Descriptive	Walker	Glover	AACN defines two new nursing roles; the clinical nurse leader and doctorate in nursing practice. AACN is proposing that we move our clinical master's advanced practice nursing degrees (CNS, nurse practitioner, CRNA, AND CNM toward the practice doctorate.	AACN directing that current master's prepared roles move to DNP.	USA
321	Grunder, T	1,4	Descriptive	Walker	Glover	Catalyst in development of CNS was enactment of the Nurse Training Act in 1964. This was directly related to nursing education. Role conflict with the NP arose related to the perception that NPs abandoned nursing to become junior physicians. In 1990, the American Nurses Association Council of Clinical Nurse Specialists and the Council of Primary Health Care Nurse Practitioners unanimously voted to combine the two councils to promote integration of the two historically separate roles.	New quote on development of CNS practice, and merger of two professional organizations	USA
325	Guido, B	1	Descriptive	Walker	Glover	This article provides a brief overview of advanced practice nursing and describes the role of nurse practitioners in an ambulatory surgery unit at a	NP Role in ambulatory surgery	USA

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						large, suburban, not-for-profit, academic hospital. Provides a table for numbers of nurses in different APN categories from 2004, identifies states that give advance practice and overview of MD supervision. Primary goals of the NP program include complete patient and chart readiness before surgery and reduction in OR delays. Makes a one stop shop.		
327	Gurka, A	1,	Qualitative	Walker	Glover	Research study, looking at factors that contribute to evaluation difficulties include the diversity of CNS role components, direct care, consultation, education, research and the lack of agreement on performance criteria	Looks at outcome criteria to better evaluate the CNS and lower role ambiguity for the CNS	USA
328	Hagopian, GA	1,2,3,4 (CNS non-period)	Descriptive	Newkirk	Cole	CNS as manager is discussed. Author feels that a CNS needs management training in their master's program. She discusses options for obtaining that management training, to include two master's degrees, a doctoral nursing degree with a business degree, etc.	The author addresses the role of the CNS as a manager, the competencies that a CNS needs to succeed, educational tracks to get those competencies, and mentions why the CNS needs them due to changing societal needs.	USA
329	Hales, A	1, 2, 3,4,5	Qualitative	Walker	Glover	Discusses how to obtain and maintain prescriptive privileges for Psych CNS.	Gives history, some state regulations, educational requirements, and some professional organization/certification issues	USA
331	Hamilton, L	1, 4	Descriptive	Walker	Glover	The CNS often finds herself working in isolation. Who exists within the health care system to guide CNS role and development	Discusses how the organization needs to step up in CNS role and career development	Canada

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						career development. They are in great demand yet professional needs go unmet and expertise under-utilized because of lack of supportive organization structure within the facility. Administrative support is essential for optimal utilization of the CNS.		
335	Hamric, AB	4,5	Other Documents	Cole	Nader	The CNS cannot afford to dismiss state regulatory oversight, instead they should actively participate in the state's regulation development to strengthen the CNS practice. Author has worked with 2 state boards of nursing to research issue of APN certification--issues include graduate programs that turn out graduate with no functional titles, and the fact that certain specialties have no certification available was discussed. Ways the CNS could interact with board of nursing were suggested.	State boards of nursing affect CNS practice--the CNS should interact with them to add input. Lack of certifications for specialized CNS also affects their practice. Masters degrees discussed	USA
338	Hamric, A	3	Descriptive	Walker	Glover	CNS programs too often have been good with role issues but not with clinical skills; conversely, NP programs are sometimes so focused on direct clinical skills that students do not learn the NP role sufficiently.	Talks about APN's in general with so slight discussion on NP and CNS curriculum. Very surprised to see the quote about role issues	USA
341	Hanson, C	1, 2, 3, 4, 5	Editorial	Walker	Glover	Debate between the National Organization of Nurse Practitioner Faculties (NONPPF) members. Dialog is between two FNP's. Talks about the blurring of the CNS/NP roles. The old	Good article to read and apply. One FNP wants the merger one does not. However both seem to think that the CNS needs to become the NP in title related to perceived power.	USA

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						argument was that practice setting differentiates CNS and NP roles does not hold true anymore. It is necessary for CNS and NP roles to articulate more clearly on what they do with each other.		
						Defines APN, Discusses graduate education. Issues for evolving APN specialties must include Clarifying the blended CNS/NP role. "in order for a profession to succeed, it must have internal cohesion and external legitimacy at the same time. The suggested "DNP" degree is particularly confusing, given the use of various specialty NP designations in clinical settings. There is a need to establish national certification and credentialing to standardize and solidify their APN level of practice.		
342	Hanson, C	1	Descriptive	Walker	Glover	Currently the CNS is in jeopardy of being replaced by nurse practitioners. Given the many roles and sub roles of the CNS, both spoken and unspoken, socialization into these roles can be difficult for the novice.	Discusses blended role in-depth. What is a blended CNS/NP role and what is not	USA
344	Harris, R	1, 3	Descriptive	Walker	Glover	The more academically prepared nurses may be better prepared to work independently and have more support from managed care agencies	Discusses how the new CNS graduate can better evolve into the five CNS domain.	USA
345	Harrison, J	1, 4	Qualitative	Walker	Glover		CNS and NP study in California based on role and influence of managed care	USA
346	Harrison-Hohner, J	1	Descriptive	Walker	Glover		Simply says that Oregon does not recognize a CNS	USA
353	Haleilton, JH	1,3	Editorial	Cole	Nader	The number of nurses leaving	How the sub roles of the	USA

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						<p>the traditional systems to practice nursing care based on their own philosophies is growing. This article shows how the sub roles of the CNS provides a great foundation for them to become entrepreneurs. Some graduate programs have even incorporated an entrepreneur project into their program to better prepare their graduates for this opportunity.</p>	<p>CNS better prepare them if they choose to become an entrepreneur.</p>	
354	Heffline, M	1				<p>The roles of the PACU CNS may be used differently due to the short-term nature of care provided in the PACU. A plan of action minimized the personal, structural, and situational resistance to a new role. To ensure success, administrators, physician, and staff must recognize the need for and the relevance of this position to improved patient care. Resistance to these changes are likely to occur and should be anticipated. The CNS can use advanced practice skills and education to guide the nursing staff who provide intensive care to the post anesthesia patient. The CNS is pivotal in integrating and coordinating the subsystems involved in the perioperative experience thus enabling the system to function at an optimal level. Patients and families may return to the institution for future treatment because of</p>	<p>The article seems to imply that the PACU CNS could be responsible for the "perioperative experience" It is also good at talking about the need for a plan on implementation of the role before the role is officially adopted in the field.</p>	USA

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						the services provided by the CNS to enhance their surgical experience.		
356	Henderson, S	1, 4	Descriptive	Walker	Glover	In our eagerness to define what APN's do, are we careening down a path we have not investigated thoroughly? Many nursing graduate programs have developed -- or are developing -- core curriculum for the merged CNS/NP role. Page	Market forces are shaping our healthcare arenas at a pace unprecedented in history. These forces will most assuredly decide nursing's future, if we allow it. By merging the distinct roles of the CNS and the NP, will we be paving the	USA
357	Hester, L	1, 3	Job Description	Walker	Glover			USA

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						And Arena rightly assert that "the decision to merge the NP and the CNS roles will be made by outside forces if the APNs functioning in these roles do not voice their opinions" Educators, administrators, and outside forces have traditionally set the pace for educational reform. The CNS role was originally designed to bring clinical expertise to the bedside.	way for the gradual dissolution of the nurse in the advanced practice arena? While the debate will continue regarding the merging and redefining of these two roles, it is becoming clear that the practicing CNS has a voice and an opinion. We need to listen. On a broader scale, a national study of APN practice patterns is needed to ensure that academic programs continue to meet the needs of practitioners.	
360	Higgins, J	1	Qualitative	Walker	Glover	The nurse executive team believed that CNSs could improve the organization's competitiveness by assuring both quality outcomes and appropriate resource consumption and, subsequently, facilitate the reimbursement process necessary to meet escalating hospital costs associated with patient care. All CNS activities must be outcome driven, cost containing, and patient population specific. CNSs must work in partnership with one or more nurse managers and be accountable for designated, unit based activities. Major components of the revised CNS role are: Nurse manager partner, manager of patient outcomes, consultant and department resource.	This article refers to CNS roles that are not traditional. They do not seem to be working independently but dependently.	USA

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362	Hill, A	1,3,4	Editorial	Cole	Nader	Examines issues raised with the increased number of cancer CNSSs and the need for role clarity/understanding. Organizational environment is critical...little understanding leads to professional isolation. Role knowledge and clarity are essential to success. UK vs. USA education requirements for CNS (brief explanation).	Lack of clarity has ...resulted in discrepancy in terminology, pay and degree confusion/ requirements	UK
363	Hill, KM	1,2,4	Editorial	Cole	Nader	Development of a tool that evaluates CNS performance in: clinical practice, education, consultation, research, admin, professional growth. Tool has expectations and outcomes. Role description and evaluation strengthened manager's understanding of CNS role. Has copy of tool. Good thing for future use. Sample behaviors/competencies for unit-based CNS positions listed.	Tools used to evaluate CNS performance did not capture all the roles they filled leading to misunderstanding of the role and lack of recognition within facility	USA
366	Hockenberry-Eaton, M	1,3,4	Editorial	Cole	Nader	Insight (personal article): Looks at the pros and cons of merging the CNS and NP roles. Discusses the strengths of each role and how the education training is focused differently. Increased marketability with blended role. More appeal to the organization due to cost-effectiveness.	Discusses the roles of NP and CNS. Looks at how the educational preparation is different. Pros and cons of merging role.	USA
368	Hodnicki, DR	3,5	Editorial	Cole	Nader	ILL--missing some of article: The American Board of Nursing Specialties (ABNS) was established in 1991 to set the standards/criteria for APN	Basic certification for recognition of competence; APN certification for entry into practice. Needs to be standards for APN	USA

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						certification; however, not all APN certifying organizations do not belong to ABNS resulting in the lack of a unified front for certification. Not one single national organization oversees certification for CNSs, only 11 states require CNS to hold masters degree. CRNA only APN that uses one professional organization. Article contains tables that compare certification/recurr. requirements.	certification; lack of leads to public misunderstanding and fuel for other disciplines (AMA)	
369	Hodson, DM	1,2,3,4,5	Editorial	Cole	Nader	Good history on OR nurses. Talks about implementing APNs into perioperative setting, especially intraop. Eludes more to CRNFA and NPs. Does a ROL on APNs in OR. Looks at post survey after APNs were used in periop setting. Discusses importance of nursing admin support towards the APN role. Great article. Lots of references.	Describes what roles APNs can play in periop setting. Talks about educational requirements by ANA, AORN and for certification. Talks about various roles in OR (Tech, RNFA, OR nurse, APN)	USA
371	Hohman, M	4,5	Editorial	Cole	Nader	1993: Looks at South Dakota Nurse Practice Act and how it regulates APNs. CNS is not recognized as an APN by SD--unable to bill, can be held accountable for practicing outside scope. In 1992 ad Advisory group was developed to evaluate and recommend changes to the SD nurse practice act; they decided they were not ready to propose the changes in the 93-94 legislative session. Not sure what happened at a later date.	The National Council of State Boards of Nursing has a position paper intended to promote consistency in standards from state to state; however, they do not have any authority--each state's board of nursing is responsible for regulating APN practice. Credentialing as regulatory requirement.	USA

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						Discusses state board of nursing's reliance on certification bodies as a acceptable regulatory requirement.	Gives history, some state regulations, educational requirements, and some professional organization/certification issues	USA
329	Hales, A	1, 2, 3,4,5	Qualitative	Walker	Glover	Discusses how to obtain and maintain prescriptive privileges for Psych CNS.	Discusses how the organization needs to step up in CNS role and career development	Canada
331	Hamilton, L	1, 4	Descriptive	Walker	Glover	The CNS often finds herself working in isolation. Who exists within the health care system to guide CNS role and career development. They are in great demand yet professional needs go unmet and expertise under-utilized because of lack of supportive organization structure within the facility. Administrative support is essential for optimal utilization of the CNS.	Discusses CNS history, roles, educational requirements, and characteristics. No specifics, may be good as a history summary and lit review.	Canada
372	Holmes, SB	1,3	Editorial	Cole	Nader	Introduction of other articles-- delete	Role history// development. Educational requirements.	USA
376	Holt, FM	none	Editorial	Cole	Nader	Need to shift away from the idea of the CNS as the "fairy godmother" who can fix all issues; to teach the staff to take responsibility and become empowered the CNS must utilize their expertise, collaboration, and coaching skills.	Various roles the CNS can play to create an empowered culture and influence their utilization in an organization	USA
382	Hotter, AN	1,4	Editorial	Cole	Nader	Not sure if this fits into competency goal. A tool was	Tool created to provide management a way to	USA
384	Houston, S	2,4	Editorial	Cole	Nader			USA

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						designed to quantify CNS services and contributions to organization based on job description and organizational goals. There are 11 outcome measures--great tool for future use. I believe it definitely fits 2 and 4. I included 4 because it is discussing the need for CNS documentation to quantify worth or productivity to the organization.	measure and evaluate the outcomes of a CNSs performance.	
385	Hravnak, M	1,3	Editorial	Cole	Nader	This article is looking at the Acute Care NP, does not say "surgical NP". However, contains good information regarding the educational comparison between NPs and CNSs and differences between their foci. 44 states recognize NPs as APNs while only 24 recognize CNSs as APNs.	Possible delete; Role of ACNP, not specifically in surgery. But contains good comparison on educational requirements of NP and CNSs	USA
389	Hummer-Bellmyer, J	1	Editorial	Cole	Nader	Perioperative nurse practitioner; however it is more of a case study on HTN, talks about the NP treating pt pre and post op, never refers to intraop. Does talk about blending NP and RNFA roles and the potential for role confusion with the creation of a new role.	Role of the ortho Perioperative NP, talks more about pre and post op care	USA
390	Hunsberger, M	1,3	Descriptive	Cole	Nader	A survey was conducted to determine the need for an expanded nursing role in neonatal care. A graduate program was developed to produce CNS/ neonatal practitioners (NP). Practicing ones are well accepted and are functioning with roles of	Development of a neonatal expanded nursing role called CNS/ neonatal practitioner (NP). Educational requirements were developed after comparing US requirements for APNs.	Article was written in Canada published in US

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						educator, practitioner, researcher and administrator. Prescriptive authority/orders are determined by each province.		
						The term "specialist" is driven by nursing's professional agenda to obtain a higher degree of education. After analyzing surveys it was determined that the term specialist is a subjective one dependent on rural vs. urban and regional vs. district. Health care professionals generally confer specialist status on anyone they perceive as more experienced or specialized than themselves.	Role of a pediatric oncology outreach nurse specialist (POONS); is higher education needed to be called a specialist? Not according to these survey results, it is based on professional perception, work experience, and hands-on skills; as well as where in the country you practice.	
391	Hunt, JA	1,3,4	Qualitative	Cole	Nader	CNS is forced to prove their worth to institutions in dollars. CNS role has opportunity to do this thru improving the quality of care.	How the role the CNS plays is used to prove their worth to their institution	UK
393	Hupcey, JE	1,4	Editorial	Cole	Nader	Is a graduate degree necessary for NPs? A survey was conducted in PA to compare the actual and ideal roles NPs were functioning in--master's prepared and non-masters prepared. There was little statistical difference in the roles they played and the non masters. NPs placed more emphasis on the 6 "masters" qualities.	Survey compared the roles of both master's prepared and non-master's prepared NPs. Questioned the need for masters degree for NPs.	USA
394	Hupcey, JE	1,3	Quantitative	Cole	Nader	Talks about the development of the CNS in the UK and how a CNS can be an influence in tissue viability nursing. May be able to say CNS as leader/change agent.	Role development of the CNS in the UK, how the CNS impacted the development of tissue viability specialty.	UK
396	Hutton, DJ	1	Editorial	Cole	Nader			

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397	Hylka, SC	1,4	Editorial	Cole	Nader	Role of the NP in surgery. Facility was looking to save \$ and implemented NPs into 6 surgical services-- does not discuss specific services provided by these NPs, just that continuity of patient care is provided. Employing an APN is a way to remain competitive and marketable in the cost-conscious healthcare market	NP in surgery--no specific services provided were identified, just that this facility implemented them into surgery.	USA
398	Hylka, SC	1	Editorial	Cole	Nader	nurse practitioner working in surgical clinics doing pre and post teaching, assessments, and case management	Role of surgical clinic NP (1)	USA
399	Ibbotson, K	1	Qualitative	Cole	Nader	Survey/interviews were conducted in Dorset. Looked at role of CNS, support for the role, and career pathways. No definition given of CNS and education was not looked at. Some were functioning without guidelines. CNS "posts appear to develop when a nurse elects to take deeper interest in a disease or client group and has the support of an influential consultant".	Role of CNS (or those functioning as one) in Dorset. No CNS requirements were discussed.	UK
404	Inaba, K	1,3,5	Editorial	Cole	Nader	Basic description of the role of a CNS; reviews a survey put out to CNSS in Oregon who were identified either by job title or certification. 98.1% masters prepared; 61% certified.	Basic description of CNS roles and sub roles. Review of survey of CNSS in Oregon. Discusses certification and education.	USA
412	Jamieson, L	4	Editorial	Cole	Nader	Confusion prevails in Australia regarding advanced practice nurses due to the lack of national or international definition of the term APN. In their lit. review; the terms	The definition of an APN varies from country to country and causes confusion for those attempting to implement APNs into their practice.	Australia

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						advanced practice, expert, and specialist were found to be interchangeable in many documents leading to further confusion. ANA has a definition; the UK has a definition; however, they differ. Author suggests that an international definition be agreed upon and published to alleviate confusion for countries who are trying to implement APNs into practice.		
417	Jensen, L	1	Descriptive	Cole	Nader	ACNP in cardiothoracic surgical care; does not talk about in surgery, just pre and post op care/consultation	ACNP in pre and post op care of cardiac patients	USA
419	Jezewski, DL	1,3	Editorial	Cole	Nader	Describes creating the role of the CNS as a case manager to incorporate the sub roles of educator, change agent, researcher and consultant. Mentions that CNS must be educated at the masters level.	Describes creating the role of the CNS as a case manager to incorporate the sub roles of educator, change agent, researcher and consultant.	USA
420	Joel, LA	1,4	Editorial	Cole	Nader	Written by past president of ANA; talks about the influence ANA had on the proposed merging of the CNS and NP roles then the call to wait; add good statements on why the role development (or lack thereof) has led to confusion	Differences in roles of NP and CNS and the influence the ANA has had on their definition	USA
421	Johnson, P	1	Editorial	Cole	Nader	Med-Surg CNS utilizes all the sub roles in their practice--practitioner, educator, role model, collaborator, researcher	Med-Surg CNS use all sub roles in their practice	USA
422	Johnston, L	4,5	Other Documents	Cole	Nader	The process the psychiatric CNS in Connecticut went through to change the statute on APN practice. Although they didn't achieve their goal	What a CNS group did to change the nursing practice statute in Conn. How the state effects CNS practice. Includes mention	USA

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						of independent practitioner, they went from under physician direction to a collaborative relationship. Eligibility for APN license requires RN, certification as APN, and 30 hr pharm program.	of certification.	
423	Jones, AG	4	Editorial	Cole	Nader	Questionable; talks about how writing up a contract with your management allows them to have a better understanding of your role and assists you in meeting goals that would benefit both parties. Only value is one more article indicating the importance of CNSs marketing their role to the organization.	How a contract with management can lead to a better understanding of the CNS role and result in better utilization of them	USA
424	Jones, C	3	Editorial	Cole	Nader	New Zealand; creating the role of a CNS from within the department; talks about combining the change nurse and level 3 nurse to create a CNS; doesn't discuss educational advancement	Creation of a CNS from within a specialty; not from advanced education	New Zealand
425	Jones, ML Kaas, MJ	1,3 3,4,5	Descriptive Editorial	Cole Cole	Nader Nader	Review of literature/meta-synthesis on advanced practice role development. CNSs concerns centered on the absence of a clear career pathway and professional development. "formal education alone was not enough to fully prepare them or enable them to develop in the role (of CNS)". Most widely regarded positive factors: relationships with other key personnel, role definitions and expectations	Barriers and facilitators to advanced practice role development	UK
429						Prescriptive authority for State requirements and	State requirements and	USA

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						Psych APNs in MN requires master's degree, certification by ANCC in mental health, 30 hrs of formal psychopharm training, and written collaborative practice agreement with a psychiatrist. One university offered a class to prepare those APNs who wished to prescribe--this article shows the results to a f/u survey of nurses who took their class. Questions include barriers to prescriptive authority, why have some not applied, what would make the process easier.	institution utilization effects the practice of psych APNs. Discusses certification and educational level	
432	Kamajian, MF	4,5	Editorial	Coe	Nader	Discusses the process an APN must go through to get credentials/privileges. Good definitions for credentialing, privileging, licensing, certification. Ultimate responsibility rests with governing body of institution with mandates from JCAHO and other organizations State nursing acts determine prescriptive authority, education requirements, licensing requirements and title recognition.	Discusses organizations that contribute to the requirements for an APN to become credentialed/privileged in an institution.	USA
433	Kaplow, R	1	Editorial	Cole	Nader	Describes the role of the CNS in oncology care and how each of the sub roles comes into play.	CNS in oncology functions as expert practitioner, role model, educator, consultant, researcher, and patient advocate	USA
436	Kennedy-Malone, LM	4	Editorial	Cole	Nader	The viability of the CNSSs role is dependent on their ability to prove their cost-effectiveness. This article gives an example of how a CNS can document	A CNS must prove their cost-effectiveness to their institution for job security. If this is stretching it, I'm OK with delete (Keep as	USA

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						their activities by outputs to assist in doing this.	example for marketing need)	
						Personal perspective of the role development of a CNS in intensive care. Author found the typical sub roles of practitioner, educator, researcher, manager; however found it difficult to function in all the sub roles. UK's definition of CNS varies from US in that it suggests higher education.	CNS in intensive care tries to implement sub roles of practitioner, educator, researcher, and manager and finds it difficult. Education levels mentioned.	
437	Kersley, K	1,3	Editorial	Cole	Nader	CNS in a collaborative practice with a physician can be beneficial to both as well as economically profitable for institutions. In this role the CNS functions mainly in the practitioner role.	In a collaborative practice the CNS functions mainly in the practitioner role	UK
441	King, MB	1,4	Editorial	Cole	Nader	ACNP in vascular nursing-- clinic and post op care; not in OR except to observe for orientation. Discusses education; specifically difficulty establishing role due to not being family practice clinic	Role ambiguity (1), competencies, (2), educational level	USA
442	Knaus, VL	1,2,3	Editorial	Cole	Nader	Part 3 of 3, see below. NJ state nurses assoc. report on CNS practice in NJ: CNS must be primary health care providers, support master's degree, will think about retiling this role to NP for both NPs and CNS (1998)	Part 3 of 3, see below. NJ state nurses assoc. report on CNS practice in NJ: CNS must be primary health care providers, support master's degree, will think about retiling this role to NP for both NPs and CNS (1998)	USA
443	Knight, C	1,,3,4	Government Documents	Cole	Nader	Part 2 of 3, NJ state nurses assoc. ad hoc committee report on the CNS in mental health. This part talks about the healthcare changes that impact CNS nursing; nothing really directly ties to	Role/title, educational requirement of Psych Mental health CNS approved by NJ state board of nursing	USA
444	Knight, C	4	Government Documents	Cole	Nader	Poss. Delete (applies to 4 by discussing healthcare reform and effect on role expectations of CNS)	Poss. Delete (applies to 4 by discussing healthcare reform and effect on role expectations of CNS)	USA

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448	Krcmar, CR	4	Editorial	Cole	Nader	Discussed different theories that could be applied to the approach of a new CNS as they incorporate into a new organization. The CNS must "sell" themselves and their qualities, must find the key players and support system in the organization and find where they fit into the workings of an organization in order to be best utilized.	In order to be utilized successfully and fully by an organization a CNS must transition into that organization and be willing to make some sacrifices initially.	USA
451	Ladden, C	1,3	Editorial	Cole	Nader	Perioperative NP, discusses their curriculum and how they can use the case management approach to revolve around the pre, intra and post operative care. Pretty vague, but shows there are curriculums out there.	Discusses the development of a perioperative NP, vague curriculum requirements and opportunities to implement the role	USA
453	Lara, ZC	1	Other Documents	Cole	Nader	This is a poster summary, not sure if we want it, I didn't see the actual article that may have been published from it and I don't see a year. Anyway, summarizes a survey conducted in CA to evaluate the time spent in each sub role of the CNS; not sure if there is enough info here to use	Poss. Delete; otherwise CNS practicing in CA show time spent in each sub role: Practitioner: 38.3%, Educator: 25%, Consultant 15%; Leader, 14% and researcher: 6.7% (Keep, just another example of role distribution)	USA
454	Larsen, LS	3	Editorial	Cole	Nader	Out of 4 universities in LA, only 1 had a CNS program; this describes the steps taken to implement an on-line distance learning program to make the CNS program available at all 4 institutions. The main part is the curriculum development	Curriculum development of an online CNS program in LA	USA
458	Lee, JL	1,3	Descriptive	Cole	Nader	Describes a curriculum that was developed in response to	Role the CNS plays in ambulatory care and a	USA

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						the needs for ambulatory care CNS. Development was by practicing CNSs and CNS students. Role of CNS in amb. Care includes all the sub roles	curriculum that was developed to meet this need	
						Looks at the CNS and NP in psych nursing and the pros and cons of each role and why they shouldn't be blended. Some great quotes: "The concept of 'the nurse is a nurse' that has kept us down as a profession is now entering the realm of APN, and will water down specialization to its least common denominator" "No one confuses a lawyer with a paralegal or a dentist with a dental hygienist. Nursing has failed to gain full respect as a profession because it has not differentiated levels but has rather maintained the 'nurse is a nurse' stance"	Pros and cons of CNS and NP in psych nursing; CNS as practitioner and educator, but some great quotes	USA
459	Lego, S	1	Editorial	Cole	Nader	I think this is a duplicate-looks familiar. Argument from psych CNS to not merge NP/CNS roles-it would be a step backward	Roles of psych CNS and argument to not merge roles(Agree that it looks like a duplicate)	USA
460	Lego, S	1,3	Editorial	Cole	Nader	Survey done in Baltimore-DC area to analyze the practice patterns of the CNS; less than 1/2 of facilities chose to participate and out of those there were 119 CNSs employed, looks at main specialty area, educational requirements and future plans for CNS employment	Main specialty areas CNSs in this region; reporting of CNS influenced their utilization	USA
461	Leherr, MA	1,4	Descriptive	Cole	Nader	Replication of Williams & Valdivieso's study comparing	CNS role functions in MN, support for separate NP	USA
467	Lincoln, PE	1	Descriptive	Cole	Nader			USA

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						CNS and NP role activities. Results support the existence of both the NP and CNS roles and show how each role functions and contributes to pt care	and CNS roles	
468	Lindeke, LL	1	Qualitative	Cole	Nader	Interview with 15 NP who used to be CNSS; results support the continued differentiated pathways and education for CNSS and NPs	Interview with 15 NP who used to be CNSs; results support the continued differentiated pathways and education for CNSS and NPs	USA
469	Lipman, TH	2,3	Descriptive	Cole	Nader	Survey was done of graduate Ped CNSSs and their administrators to assess their preparation in clinical decision making and coordination of care across the continuum-- results were used to change GSN curriculum	Perceived competency of ped CNS by themselves and their administrators regarding clinical decision making and coordination of care was assessed and used to change GSN curriculum to meet needs	USA
470	Llahana, S	1	Quantitative	Cole	Nader	Study done in UK to explore the role of the diabetes CNS; results showed time spent in each sub role (mean percentage): Practitioner:42.5%; Educator: 23.8%; Consultant: 14.7%; Researcher: 4.2%; Manager: 8.7%	Explored % of time spent in each sub role by diabetes CNS in UK	UK
473	Logan, L	1	Descriptive	Cole	Nader	Results of a survey sent out to certified community health CNSSs showed that their (mean) time spent was as educator: 35%, leader: 22%, clinician: 21%, consultant, 14%, researcher: 8%. Results imply that community health should remain a tract for the CNS education. Also looked at was the 3 spheres of influence and results are in article.	Community health CNS survey shows results of how their time is spent in each sub role	USA
475	Lopez, V	3	Editorial	Cole	Nader	Looking at the role	Educational requirements	Hong Kong

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						development of APNs in Australia, mainly focused on NPs, of interest: Australia requires NPs to hold a master's degree, but it mentions specialist nurses who must also hold a master's	of NP and specialist nurse in Australia are master's prepared	
476	Lorensen, M	3	Editorial	Cole	Nader	Development of APN curriculum in Nordic countries was similar to that in the USA; main point: regardless of the title (for a CNS), it is essential that nurses have a graduate education	Educational requirements of CNS in Norway are master's prepared	Norway
477	Loudermilk, L	1,4	Editorial	Cole	Nader	Reviews the most common themes in the literature that lead to role ambiguity for the CNS they include inadequate socialization to the role, conflicting role expectations, inconsistent job descriptions, poorly defined job qualifications, multiple accountability, inconsistent placement, unclear criteria for evaluation. Good article for history of CNS development with some great quotes	Shows common themes from ROL that affect the utilization and role ambiguity of the CNS	USA
479	Luparell, S	4	Editorial	Cole	Nader	Defines what a CNS is and what Montana requires to practice as a CNS: masters or doctorate and certification, only psych CNS can have prescriptive authority	What Montana requires of a CNS	USA
480	Lynch, A.M.	1	Editorial	Cole	Nader	Pro article for blending the NP and CNS role in parent-child nursing, this step makes the need for legislative re-titling, increased education, the need to "remain sharp and intact as we create the new vision"	Pro article for merging of CNS and NP roles, possible delete	USA
482	Lynch, MP	1,4,5	Descriptive	Cole	Nader	Review of a survey sent out to Oncology APNs respond	Oncology APNs respond	USA

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						oncology APNs to address the critical issues they face results used to assist the oncology nursing society steering council in future endeavors. Reviewed previous studies, and summarized survey. Looked at state board requirements, role understanding by pts and staff, importance of education, certification, licensing. Then discussed top issues they face.	to survey to discuss roles, role issues, state regulations, education and certification importance	
						Review of history of requirements of CNS concerning second license, certification, etc. NACNS doesn't think second license is necessary; however, certification is another story. Requirements for CNS to pass certification exam in their subspecialty when no exam exists is a major barrier. Article written in 2002 states CNSS had until 2005 to find appropriate certification exam, we need to find out what came from that. Supposedly NACNS was developing a "core" CNS exam since med-surg test was a poor test of subspecialty knowledge. Need to look into further	Need for certification for subspecialties in order for them to be recognized as CNS; NACNS was suppose to be developing a core test, need to evaluate further	USA
484	Lyon, BL	Other Documents	5	Cole	Nader	Questions and answers a CNS should ask in regards to their state nurse practice act. Covers issues such as whether the title of CNS is protected (master's degree required); certification	State nurse practice acts determine the titling requirements and certification of CNSSs	USA
486	Lyon, BL	Other Documents	4,5	Cole	Nader			

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487	Lyon, BL	4,5	Other Documents	Editorial Cole	Nader	NACNS brief synopsis of model statutory and regulatory language to regulate CNS practice. Good stats--need to get final and more recent copy. 26 states recognize CNS; 7 more psych CNS only. Major barriers include not recognizing CNS because of lack of specialty certification	NACNS analyzed statutes and regulations of 45 states to develop regulatory language for CNS practice. Not the final version, we need final and more current one.	USA
488	Lyon, BL	4,5	Editorial	Editorial Cole	Nader	Author describes the regulatory issues for specialty CNSs and how this requirement effects their practice. Has great information about state boards, practice acts, and who oversees what.	How state regulatory agencies affect CNS practice and what specialty CNSs need to be aware of	USA
489	Lyon, BL	1,3,4,5	Editorial	Editorial Cole	Nader	Great explanation on authority covered by RN license and how the CNS has been practicing within those RN domains--it is the desire on the part of the CNS to practice outside of the RN roles that has led to the regulatory requirement confusion. These regulations in turn make it more difficult for the CNS who is practicing within the RN roles to call themselves APNs and practice without the second license required by CRNAs and CNMs. This article (1994) states there are 37 states who recognize CNSs; there are 42 CNS specialties and only 9 CNS specialty exams. Due to people identifying themselves as CNSs without educational requirements has made it	Confusion about the definition of advanced nursing practice has led to regulatory confusion. Is the CNS practice covered by their RN license or does their practice require an additional one? State regulations affect CNS practice and recognition. Discusses educational requirements	USA

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490	Lyon, BL	1,2	Editorial	Cole		impossible to track CNSS nationwide.	Role of the CNS are different from NP; con article for blending of roles. Extensive outline of CNS competencies as they fall under the 3 spheres of influence defined by NACNS	USA
491	Lyon, BL	1, 3,4,5	Other Documents	Nader	Newkirk	CNS regulations vary from state to state. NACNS created model statutory and regulatory language governing CNS practice to decrease variation. Covers use of title, definition, scope of practice, standards of advanced practice, education, certification, and certification waivers.	Discusses spheres of influence (1), educational preparation required (3), statutory issues (4) , and credentialing(NACNS involvement (5)	USA
492	Lyon, BL	2,3,4,5	Other Documents	Nader	Newkirk	Limited access to CNS services due to lack of coordination between state boards of nursing. NACNS created model statutory and regulatory language governing CNS practice to decrease variation. Discusses authorization of CNS practice by state to include title protection and educational requirements. Covers public right to be cared for by competent provider. Competence demonstrated by certification. Acknowledges not all CNS specialties have certification. Recommends portfolio review. Provides table that lists recognition of CNS by state. Some states limit APN to NP only. Discusses	Proof of competency via certification (2,5), educational requirements listed (3),state board of nursing issues (4), NACNS involvement (5) ,	USA

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493	Mackay, M	1,4	Other Documents	Nader	Newkirk	Discusses the role of CNS as researcher. The link between research and practice. CNS responsibility to push practice issues up the organizational chain. CNS aware of clinical need for research-based solutions. CNS may play the role of change agent and articulate need to supervisors.	Role of researcher, change agent, and clinical expert (1), CNS in position to articulate need for change and push up priority in organization (4)	USA
496	Malone, JA	1,3,4	Editorial	Nader	Newkirk	Psych CNS discusses personal belief on future of CNS practice. Feels that CNS will not continue due to constraints on budget. Will be cut by administration. Feels invisible to physicians/social workers. Believes CNS should be educated as entrepreneurs to be successful. Discusses educational courses that she feels would benefit the CNS.	Discusses role of CNS (1), recommended educational courses to enhance CNS practice (3), budget constraints by organization and lack of acceptance by physicians (4).	USA
497	Maloney, AM	1	Editorial	Cole	Nader	Role of a CNS/NP in pediatric oncology unit started out as direct patient care but has now developed to encompass other sub roles of consultant, educator, researcher and leader.	Role of the CNS/NP in ped. Oncology unit encompasses all the sub roles	Canada
501	Martin K	1,2,5	Other Documents	Nader	Newkirk	Discusses role of trauma NP. Board of registered nursing states that acute care NPs can act as first assist in OR. Also lists under job description that the NP may participate in "direct-to-OR" case.	Discussed the role of the acute care NP (1), lists skills that may be performed (2), Board of nursing is referenced in regards to competencies/skills of the NP (5)	USA
502	Martin PJ	1,4, 2	Descriptive	Nader	Newkirk	A study that is trying to clarify the contributions of the CNS by describing the services they provide. They utilize patients,	Discusses different roles of the CNS (1), discusses organizations perceptions of the CNS role (4) Also	UK

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						caregivers, and the hospital organization to describe what they see the CNS doing. Discusses directly observable/measurable services as well as the different facets of the expert practitioner. Findings of the study determined that the CNS works at the micro level (collaborative and direct patient care) and macro level (consultation and info service for the organization). Defining a precise MO for the CNS may be undesirable. Preferable to allow the CNS to adapt their role to the specialty service.	lists competencies/activities of the CNS.	
503	Martin, RK	1,3	Other Documents	Nader	Newkirk	Discusses merging of NP/CNS role. States that CNS returning for post-masters certificate to be an NP are at a disadvantage clinically. Further discusses difficult transition from expert CNS to novice NP. Discusses role confusion when merging both roles and the need to delegate/eliminate some of the roles due to overload of responsibility.	Discusses role of NP and CNS, merging of NP/CNS role, and role confusion (1),discusses post-masters certificate for NP (3)	USA
504	Martin,S	1,2,3,4	Other Documents	Nader	Newkirk	Discusses development of minor surgery clinic ran by a nurse practitioner. Discusses minor surgery competencies as well as type of training needed to prepare the NP. Discusses support at organizational level.	Role of the minor surgery NP (1), competencies listed (minor surgery) as well as discussion of a competency checklist (2), training program (3), requirements from organization for support of program (4)	UK
505	Maxson, PM	1,4	Other Documents	Nader	Newkirk	CNS must prove their worth and cost effectiveness to administration to continue to	Discusses lack of understanding of CNS role as well as listing studies	USA

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						have a job. Numerous articles in the literature show cost savings to the hospital due to CNS intervention. Recommends CNS conduct outcome studies to prove their clinical and financial worth.	that discussed different roles of the CNS in acute care, also discusses the need for CNS to act in role of researcher to conduct studies to prove worth (1), need to prove worth to administration/organization (4)	
506	Maylor, M					This is another article from Britain that is comparing the role of NC to that of a CNS. The Agenda for change has placed the NC in the "top post" and placed CNSs in a lower post. It is discussed that many CNSs do not hold a master level degree. CNSs are in danger of not being seen as advanced practice or losing their title all together. CNSs are also struggling with no role delineation. Numerous examples are given throughout the article comparing the two and showing that they are very similar in nature. Evaluation of the two posts could be accomplished by testing outcomes of their nursing care rather than looking at job titles	Role and competency comparisons of NC and CNS (1,2), education (3) agenda for change (4)	UK
507	Maylor, M			Other Documents	1,2,3,4	Nader	Newkirk	Wales

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						what they do. CNS are not necessarily seen as experts.		
508	Maylor, M	2,4	Other Documents	Nader	Newkirk	The UKCC report chose not to include NP's as advanced practice nurses. No set regulation for NP practice. Concerned that title assumes competence. Questions difference between specialist practitioners and clinical nurse specialist. Recommends that titles reflect area of practice to allow for distinctions.	Discusses titles and assumed competence (2), UKCC report and lack of NP requirements for competence or recognition as advanced practice (4)	Wales
510	McAlpine, L	1,4	Descriptive	Nader	Newkirk	Evaluation of the CNS depends on their area of focus, role priorities, length of time in role, and the priorities of the evaluator/organization. Identifies importance of proving cost benefit through analysis of CNS practice. Discusses case management and multidisciplinary collaboration. Numerous CNS run projects were described with an associated statistical and cost-savings analysis. Collaboration was identified as the key factor for success in outcome measures.	Discusses role of researcher, case manager, expert clinician (1), identifies importance of CNS effectiveness and worth to administration/organization (4)	USA
511	McCabe, S	1, 2, 3,4,5	Other Documents	Nader	Newkirk	Believes that psych nursing would benefit most by a CNS/NP merger. NP would provide more biological aspect of mental health care and CNS would provide more of the psychodynamic care. Currently there is no Psych NP exam. Most psych patients are being seen in primary care. Psych nursing feels that NP/CNS merger will bring	Discusses roles of CNS/NP (1), competencies for NP and CNS identified through certification exam (2), discuss masters education and need for revamping of graduate curriculum (3), appeal of cost containment for administrations (4), concern with no psych cert exam as well as the need	USA

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						psych patients back to psych nursing instead of FNPs. Additionally, cost containment issues would be improved with this merger. Concern with NP and CNS certification exams as well as prescriptive authority. They would like to refine the graduate curriculum for psych APN's to enhance the CNS/NP merger as well as create a new psych APN certification exam.	for NP/CNS merger certification (5)	
512	McCaffrey, D	1,4	Editorial	Nader	Newkirk	Lists sub roles that are unspoken but essential to an effective CNS practice. Describes the CNS as the choreographer and deliverer of new ideas/projects. Discusses the importance of having the ability to effectively sell the new ideas to the administration as well as colleagues. Also describes the CNS as the weatherman looking at the current trends as well as looking into the future.	Discusses roles/sub roles (1), discusses importance of selling ideas to administration (4)	USA
513	McCreadie, M	1, 4,5	Descriptive	Nader	Newkirk	Discusses the role of the CNS in the UK. Utilized an interview process of 20 CNSs to determine their current work/projects. The UKCC is creating a document that regulates higher level practice. The study was utilized to review the workings of the CNS and compare it to higher practice. The most common role of the CNS was found to be the communicator-career role. Extrinsic and intrinsic factors are causing overload	Role of the CNS in the UK (1), admin requirements for proof of worth through use of reports (4), UKCC requirements for higher level of practice (5)	UK

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518	McFadden, EA					for the CNS. Research is being affected by this overload. Additionally, several CNSs had to provide a quantitative evaluation of their work that indicated the number of patients seen to provide proof of their worth to administration. CNSs did not feel that this fully represented what they did as a CNS. Conclusion was that lack of research may stop the CNS from being considered into the higher level of practice category.	We utilized this article in our proposal. Discusses roles of the CNS. Role most frequently enacted is the role of clinical expert. Research was the most infrequent. Many CNS did not feel educated enough in the admin role. Discussed the effect of cost containment and the changing healthcare environment on the CNS. Importance of aggressively marketing the role was stated. Discussed importance of organizational and human resources in regards to effective research for the CNS. Listed guidelines for new and practicing CNS.	Discusses roles of the CNS (1), discusses masters level education and lack of education for admin (3), importance of marketing CNS to admin (4)	USA
519	McGee, P					Newkirk	This is a British article that is looking at the North American outlook on advanced practice and the CNS. They describe our terminology as having numerous titles and difficult to understand. Throughout this	Roles of CNS and APN (1) education (3) differences in state statutes and laws regarding CNS practice (4)	UK

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520	McGee, P	1,3,5	Other Documents	Nader	Newkirk	Discusses levels of nursing proficiency as primary, CNS, and advanced practitioner. Uses the wound care specialty as an example. These are titles given by the UKCC. The CNS role is based in practice. The author doesn't classify CNSs as advanced practice nurses. The concept of advanced practice level needs to be clarified in the British system. The three levels of practice need to be examined to assure effective nursing practice. The author feels that the US fails to prepare advanced practice nurses for the different aspects of the advanced practice role.	Discusses role(1), discusses education needed for different levels (3), UKCC establishing levels of practice	UK
521	McGonigle, D	DELETE4	Other Documents	Nader	Newkirk	This is a small little article that is discussing the need for CNSs to show outcome measures in their practice to prove their worth. It also mentioned that a set of	Changing healthcare market and need to prove worth (4)	USA

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522	McLeod, RP	1,2,3,5	Other Documents	Nader	Newkirk	Discusses NP/CNS merger in both positive and negative terms. Discusses educational curriculum for both tracks as well as NP certificate programs. Certification discussed in regards to providing the impetus for growth of masters level programs for NPs. Many states allow NPs to practice without a BSN. Driven by physician led organizations that "certify" persons to become like a physician extender at a lower cost than a Master's prepared nurse. The final comment is that the CNS/NP merger needs to be decided upon before it is decided for us.	Generically discusses roles (1), competencies of NP discussed (2), educational requirements/curriculum of CNS/NP (3), Certification of NP discussed (5)	USA
524	McMillan, SC	1,2,5 (CNS non-period)	Descriptive	Newkirk	Cole	Oncology Nursing Society founded the Oncology Nursing Certification Corporation to formulate a certification exam for oncology nurses. After establishing roles of a basic entry level and an advanced entry level oncology nurse, they formulated an advanced oncology nursing certification exam. A survey was conducted of APNs (both CNS and NPs) to determine which roles and activities were entry level for an advanced practice nurse. The results were used by the credentialing organization to develop an exam for credentialing.	Roles and activities of the oncology CNS and NP were determined. How a specialty organization developed an exam for credentialing.	USA

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						agencies to develop the test.		
525	McMyler, E	1,2,3,4	Descriptive	Nader	Newkirk	Very thorough article utilizing a literature review that looked at perceptions of the CNS role by CNSSs, management, staff nurses, and physicians. It was found that CNSSs and management agree on roles with the exception of the emphasis placed on research. Staff nurses appeared to have differing opinions of the CNS and it was advised that expectations and needs need to be discussed with the staff to make the CNS effective. Physicians, if they understand the role utilize them effectively, however, many utilize them as office nurse or secretary. Closes by discussing importance of marketing the role.	Roles and competencies discussed (1,2) education (3) administration perception and need for marketing (4)	USA
526	McNair, S.	1, 2,3,4	Other Documents	Nader	Newkirk	Education of the forensic CNS was discussed. Initially she started out as a NP which then allowed her to attend an 8 month preceptorship in forensic sexual assault examinations. She then identified herself as a forensic CNS. Her competencies are discussed as well as her involvement in the community/organization.	Discusses role and competencies of the forensic CNS (1,2), her post NP training is discussed (3), her involvement in the organization is emphasized (4)	UK
529	Mehan, C	1, 2, 3	Other Documents	Nader	Newkirk	A CNS and NP discuss their roles and competencies and how they use them together to provide excellent patient care in a cardiac unit. They also discussed their graduate education and the focuses of	Roles and competencies of CNS and NP discussed (1), educational curriculum of each discussed (3)	USA

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530	Mellon, SK	Other Documents	1, 3	Nader	Newkirk	Discusses the benefit of having a psych CNS provide homecare and expand out of the hospital-based care. Case studies are provided that discuss examples of CNSs providing physical and emotional care at home. Reimbursement is discussed as well as educational requirements for a CNS to be reimbursed.	Homecare role is discussed (1), educational requirements for reimbursement (3)	USA
531	Merwin, E	Other Documents	1, 2, 3, 4	Nader	Newkirk	Description of the psych CNS to include education, roles, competencies, distribution, as well as barriers to practice. Informational article.	Description of the psych CNS to include education (3), roles, (1)competencies (2), distribution, as well as barriers to practice (4).	USA
532	Mick, DJ	Other Documents	1, 2, 3, 4	Descriptive	Nader	Discusses potential blending of CNS and NP role. Utilizes a study with questionnaires to asses expertise in each of the domains as well as value of role related tasks. Excellent study that discussed the educational and role differences amongst CNS and NP. Final comment was that NPs and CNSs need to stay separate and not blend.	Lists roles and competencies of each (1,2), compares curriculum (3), discusses importance of validating fiscal benefits of each role to organization (4)	USA
533	Micks, DJ	Other Documents	1,3,4		Newkirk	Discusses differing roles and educational curriculum of the NP/CNS. Acceptance by physician groups is more prevalent for NP than CNS. Differing goals and preparation for those goals is listed. Literature review both for and against a merger is discussed. The article closes by discussing struggles for both types of nursing groups. NP perception of worth discussed (4)	Roles of both nursing groups discussed (1), educational curriculum and goals are listed (3), physician groups/organizations perception of worth discussed (4)	USA

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						suffers with lost nursing identity and CNS may feel devalued and underappreciated with less job opportunities.		
534	Middleton, J	1,3, 4	Other Documents	Nader	Newkirk	Discusses CNS practice in Saskatchewan. Roles practiced as well as educational requirements. Mentions that CNSs are unionized and therefore have limited administrative duties. Their roles focus on are clinician, educator, and researcher. Article further describes jobs of four different CNSs in this location. Master's degree required.	Discusses roles of CNS in Saskatchewan (1), educational preparation (3), CNS is unionized which affects roles undertaken (4)	Canada
535	Miller, S	1,2,3, 4,5	Other Documents	Nader	Newkirk	Discusses the role of the CNS in Europe. Author believes that the role of the CNS is well developed in the US and Canada, but not as much in Europe. Believes that the main difference between the CNS in America and Europe is educational requirements. Most CNSs in Europe have attended some sort of specialty course such as I.C. Discusses difficulties that European CNSs will have to face both from within and outside the nursing profession. Discusses each role of CNS and how they would be beneficial. Discusses Project 2000 that is driven by the UKCC that addresses higher practice in Europe.	Discusses roles and competencies to complete those roles (1,2), discussed educational requirements in US and Europe (3), roadblocks from organization as well as they need for administrative support (4), UKCC project 2000 (5)	UK
536	Miller, SE	1, 2, 3, 4	Other Documents	Nader	Newkirk	Discusses traditional CNS role and introduces role of CNS in	Discusses roles and competencies both	USA

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						home healthcare. Discusses the importance of linking outcome measurements to CNS activity to prove cost effectiveness. New role in home care provides opportunities for creative nursing interventions and patient education. Each role is discussed in the homecare arena. Master prepared CNS can be adjunct faculty at University and assist with student placement in homecare arena. Cost benefits are listed in detail. Discusses benefits of NP/CNS merger for reimbursement in home healthcare.	traditional and in home healthcare (1, 2), education discussed with benefits of masters education in specific roles (3), cost effectiveness and proof of worth to organization discussed in detail (4)	
537	Mills, ME	1,3, 4	Editorial	Nader	Newkirk	Discusses the importance of collaboration as a CNS role. Mentions that CNS is effective collaborator due to advanced education and experience. Emphasizes organizations desire for collaborative relationships and how it can enhance relations between different disciplines throughout the healthcare organization.	Discusses the role of collaboration (1), benefits of advanced education (3), and approval by organization for collaborative relationships (4)	USA
538	Minarik, P	4	Editorial	Nader	Newkirk	Editorial discussing some professional groups putting pressure on legislative bodies. Discusses the Balanced Budget Act of 1997 as well as state issues in Idaho, Maine, and Oregon. Hopefully we have more up-to-date legislative material and can delete this eventually.	Nursing legislation (4)	USA
539	Minarik, P	1,3, 4	Other Documents	Nader	Newkirk	Discusses the role of CNS as an educator in a university	Role of CNS as educator/collaborator	USA

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						role. Role is described as collaborative where CNS not only practices clinically, they are faculty in a university. Emphasizes importance of educating at the graduate level and not BSN. States that ability to practice clinically provides CNS with more credibility in academia. Benefits of this relationship are described as increased clinically based relevant research as well as autonomy and self-direction. The article then goes on to describe the authors collaborative relationship with a university. Challenges were stated to be allocation of time and expectations from the university that were unrealistic.	discussed (1), emphasized importance of teaching at graduate level not BSN (3), expectations of university (4)	
540	Minarik, PA	3,5	Government Documents	Nader	Newkirk	1997 This article provides a list of 38 states and DC and their requirements for recognition of the CNS as well as prescriptive authority. Important info for our study	Lists educational requirements by state(3), lists BON authority amongst certain states as well as discussing certification.	USA
541	Minarik, PA	1,2,4	Editorial	Nader	Newkirk	This article is discussing the many uses of the CNS during the healthcare reform and how they can position themselves for success. Different roles and competencies are discussed as being beneficial. The role of CNS as physician substitute or complement is mentioned. It is recommended that the CNS combine clinical expertise with systems savvy to place themselves in a position for success in the	Roles and competencies discussed (1,2) healthcare reform (4)	USA

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542	Minarik, PA	3,4	Editorial	Nader	Newkirk	This article is informing the audience of The National Advisory Council on Nurse Education and Practice. The background of the report written includes current CNS supply, roles, funding for graduate education, curricula, and credentialing. The focus of NACNEP includes federal funding for CNS programs, clarifying the CNS role in the changing healthcare system, and assure that the CNS has a role in the changing healthcare system.	Educational requirements (3) professional nursing bodies and legislation (4)	USA
543	Minarik, PA	3,4,5	Other Documents	Nader	Newkirk	1999This article provides a list of 44 states, the Virgin Islands, and DC and their requirements for recognition of the CNS as well as prescriptive authority. Important info for our study.	Educational funding (3) healthcare reform (4) credentialing (5)	USA
544	Minarik, PA	3,5	Government Documents	Nader	Newkirk	Utilizes feminist theory to implement the staff development or educator role of the CNS. Theory is of no relevance to our study. CNS as mentor/educator through the use of clinical expertise and assisting nursing staff in	Lists educational requirements by state(3), lists BON authority amongst certain states as well as discussing certification.	USA
545	Miner, DC	1,4	Other Documents	Nader	Newkirk		Discusses the role of educator/mentor (1), empowering generalist nurses with knowledge to implement change in the healthcare organization (4)	USA

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						acquiring this knowledge is discussed. Recommends assisting "generalist nurses" in acquiring critical thinking and problem solving skills to become their own "CNS".		
546	Miner, DC	1,3,4	Other Documents	Nader	Newkirk	Part 2 of article utilizing feminist theory with application to advanced nursing roles. Provides case studies of CNS utilizing this theory in their interaction with nursing staff. Focus on mentor/consultant/collaborator. Discussed mentoring generalist nursing and assisting them in moving up into research committee and standardization/protocol committees. Thus feeling empowered to work with organization. Education level was mentioned as masters prepared in regards to the nurse educator that assisted all nurses in enhancing their education.	Discusses role of CNS as mentor/educator/consultant (1), mentions masters preparation for the educator/director of the outreach education program (3), discusses empowering nurses in the organization (4)	USA
547	Mirr, MP	1, 3,4,5	Other Documents	Nader	Newkirk	Discusses the merging to two ANA councils to form the Council of Nurses in Advanced Practice. Challenges include titling, education, practice and regulatory restrictions. This organization describes NPs and CNSS not separately but as advanced practice nurses utilizing multiple practice models in numerous settings. Further discusses definition of advanced clinical practice, titling and certification, regulatory issues, educational	Discusses the role of the APN generically (1), discusses curriculum for APN (3), mentions misconception of role by organization and comparisons with other roles such as PA (4), discusses certification and Council of nurses in advanced practice (5)	USA

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						issues and practice issues. Concerned that APNs may have to fight to distinguish themselves from PAs. Closes by discussing challenges for the APNs future. Good article!		
549	Mitchell-Dicenso, A	2,3,4	Qualitative	Nader	Newkirk	Qualitative study that assessed outcome measures for NICU patients when being seen by a CNS/NP versus a pediatric resident. Ultimate finding was that there was no difference in outcome measures and the CNS/NP were found to be slightly more cost effective. Education of the CNS/NP prior to this study was discussed. The article never clarified if the CNS/NP was a merged role or if it was either/or.	Competencies of the CNS/NP were discussed (2), educational background was discussed (3), support from physicians organization was discussed (4)	Canada
551	Mohit, D	1,2,3,4	Other Documents	Nader	Newkirk	This article is promoting the use of psych CNSs in home healthcare. The role of the CNS is discussed. However, when discussing competencies needed in home healthcare the nurse is identified as an RN. It was ambiguous whether they were referring to a CNS.	Role of the CNS discussed (1), competencies of "RN" in home healthcare (2)	USA
553	Moller, M	1,2,3,4,5	Other	Nader	Newkirk	Organizations such as HMO are discussed in regards to CNSs losing their jobs. Thus, the need for the CNS to expand their role outside of the institution. Case studies are given with examples of how the CNS positively worked in the home healthcare arena.	Education level of psych CNS (3), HMO and institutional downsizing (4)	USA
						This article promotes the	Role and competencies of	USA

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554	Mooney, F		Documents			blending of a psych CNS/NP to provide both psychosocial and biological care. Educational curriculum as well as prescriptive authority are discussed. Concern was given to different curriculum focuses dependent on what region of the country the program was located. Breaks down the NP and CNS role and then lists pro and cons to merging. Lack of role recognition by the public for the CNS is discussed as well as the push for safe, quick, and economic care seen in primary care rather than specialty care in the hospital. Different coding of Advanced Nurses in each state is discussed. The article closes by discussing the new direction psych advanced practice nursing could take with a merged role.	CNS and NP discussed (1), educational differences and similarities (3), desire from management and HMO for cost-effectiveness and primary care (4), certification for advanced practice (5)	
						This study utilized a questionnaire to both CNSS and their DON chief to determine the professional characteristics as well as various roles of the CNS. It also assessed the importance of the roles to both the CNS and DON. It identified most CNS to be in staff positions rather than admin with very little emphasis on research. CNSS seemed to be happy with this arrangement as it provided more flexibility in their schedule. The DON was in agreement regarding their role	Roles undertaken by the CNS (1), DON view of role importance and support given to clinical expertise (4)	USA Newkirk

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556	Moore, P	3,4	Other Documents	Nader	Newkirk	This article is promoting all advanced practice nurses and their integration into the healthcare system. Each type of APN role is discussed. APN benefits are discussed as well as comparison to physicians. Concerns with professional specialization issues include lack of standardization in education and credentialing, nonspecificity of labeling, blurring of roles. Concern that nurses who receive certification in specialties are identifying themselves as APN due to receiving a certification.	Education (3) Legislation (4)	USA
557	Moore, SM	1,2,3,4,5	Other Documents	Nader	Newkirk	Restrictions on scope of practice and prescriptive authority are discussed as well as third party reimbursement. The article closes by discussing new visions for APNs as well as the importance of CNS graduate education to focus on advance standardization (5)	Discussed roles and competencies of APN (1), educational curriculum (3), role ambiguity and roadblocks by organization/system (4), credentialing and lack of standardization (5)	USA

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						practice skills instead of role preparation.		
558	Morris, K	1,3,4	Editorial	Nader	Newkirk	This is a response to a question as to whether to hire an NP or CNS. The role of NP and CNS are discussed with the CNS being described as being in the consultative role rather than the direct patient care role. Perfect example of the lack of understanding of our role. Educational curriculum are discussed and the answer is closed by stating that they should hire according to the needs of the organization.	Discusses role of CNS and NP (1), educational curriculum (3) organizational needs (4)	USA
559	Morrison, J	1,2,3,4	Other Documents	Nader	Newkirk	Article utilized in our proposal. Discusses the roles of the PCNS in detail. Describes history and educational requirement of CNS. As well as the ability to prove cost effectiveness to the administration. The roles that the CNS acts upon is dependent on the goals of the CNS and the needs of the facility/administration. CNS must be able to effectively articulate those goals to the organization.	Discusses roles and competencies in detail (excluding administration) (1, 2), Mentions graduate preparation (3), need to articulate goals and cost effectiveness to organization (4)	USA
560	Morse, C.J	1,2,3,4	Other Documents	Nader	Newkirk	Article discusses the role of the APN in a transplant department. Discusses benefit of NP/CNS merger. Discusses criteria for APN which includes clinical practice. Admin and educator are not considered APN. Discusses education of the NP/CNS and mentions a program in San Diego that	Role and competencies discusses (1,2), educational requirement (3), discusses nursing social policy statement regarding APNs (4)	USA

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561	Munchbach, E		Other Documents	1,2	Nader	Encompasses both. Lists the roles and competencies with examples. Has small section on the perioperative contribution of an APN. Discusses the administrator role and describes it as being out of the comfort zone of the APN. Closes by discussing the authors education that started out as a CNS and then she went back to obtain her NP. States that she felt like it was an important inclusion to her practice. CNS not practicing intraoperatively.	Discusses roles and competencies in the ED (1,2)	USA
562	Mundinger, MO		Other Documents	2,4	Nader	Short article that describes a CNS in the ED. Lists her roles with a few small blurbs on competencies that are a must in the ED.	Discusses roles and competencies in the ED (1,2)	USA
563	Mundinger, MO		Other Documents	2,3,4,5	Nader	Discusses the increased use of APNs mostly in primary care and the effect on physicians. Occasional mention is given to the CNS in regards to their knowledge being equivalent to a 1st year medical resident. Discusses competencies of NPs and the push of health care reform to increase primary care access to the population. Thus, increasing the need for physicians to join with nurses in primary care.	Discusses competencies of NP (2), healthcare reform and push for increased primary care. Also resistance from physician groups to acknowledge APN (4)	USA

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						competencies and credentialing of NPs. Also discusses academic programs and lack of consistency in both masters and doctorate programs. Goes into detail regarding doctorate programs and states how they are incapable of producing APNs. Recommends 1 year fellowship after practicing as a NP for several years to receive doctorate. Discusses physician resistance to APN and the benefits of APN care in the primary care setting.	reasonable cost (4), and credentialing bodies (5)	
569	Naylor, MD					This article is a review of literature that discusses roles of the CNS to include time allocation of roles and cost of care. Role perceptions are discussed and it is mentioned that different groups define CNSs in different ways. Such as professional organizations, students, faculty, CNS, and administrators. The highest level of agreement was between CNS and administration. Although the CNS devoted most of their time to direct patient care. Time allocation was discussed and mentioned that during the 1st year of a CNS that most of their time was devoted to direct patient care. Allocation of time was dependent on years of experience. A model was created that looks at the CNS and delivery of care to vulnerable populations. It is	Roles of the CNS (1), functions and competencies (2), administrative beliefs and a model looking at cost effectiveness (4)	USA

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						called the Quality Cost Model of Clinical Specialist Transitional Care. Several case studies were listed that showed benefits of CNS care. Functions of the CNS were discussed which included informing, prescribing, questioning, and assessing. It closed by suggesting further research to compare the practice patterns of the CNS versus physicians.	Role of the GCNS was discussed as well as competencies interspersed throughout the case study (1,2), healthcare reform was discussed (4)	USA
571	Neff, DF	Other Documents	1,2,4			Newkirk	This short article refers to the healthcare reform and discusses the importance of CNS placing themselves in the most marketable position. An increase in graduate nursing programs in FNP and a decrease in CNS. Recommends considering gaining NP skills. Market is in a state of flux and CNS role should be determined by the	Discusses further education as an NP (3), healthcare reform and marketing the CNS role to admin/organization (4)
572	Neisser-Frankson, C	Other Documents	3,4			Nader	Newkirk	USA

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573	Nelson-Conley, CL	1,2, 4	Other Documents	Nader	Newkirk	Discusses the development of the role of a PCNS in the Indian Health Service. Discusses the role throughout the perioperative continuum. Role development is discussed to include assessment of the need for the PCNS, planning of role expectations to include financial support, implementation of the role as well as administrative evaluation. The article was closed by discussing transcultural nursing.	Discusses the role of the PCNS and implementation in the Indian HS (1), admin and financial support (4)Also gives examples of activities/competencies of the PCNS through each phase of perioperative nursing.	USA
575	Newton, C	1,2,4	Other Documents	Nader	Newkirk	This article is discussing the CNS in a joint apt where they have a two part job such as academic-clinical where one persons services are shared by two agencies. This is encouraged to bridge the gap between clinical practice and research. Role and time allotment were discussed. Goals established and supportive organizations were mentioned. Role ambiguity and confusion can lead to tension. Potential competencies in a joint venture were listed as well as going through the roles in detail. The benefits to the organization were mentioned as well as becoming in collaborative practice with other healthcare professionals. It was advised that this type of	Roles of the CNS in a joint appt (1) competencies (2), the need for a supportive organization as well as time allotment to each organization (4)	USA

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						role takes time and patience. It closed with role ambiguity and conflict and mentioned that the CNS should remain neutral when in the middle of a conflict between medicine and nursing.		
						Interesting article. Discussed a nursing title called a corporate clinical nurse educator and said they are similar to a CNS. Discussed the need for periop nurses to venture outside of the OR due to the Healthcare reform. They describe their roles as educator, researcher, practitioner, and consultant. Discussed all the settings they work in to include trainers of reps prior to entry into the OR on such issues as scrub wear and aseptic technique. Also mentioned that they assist in clinical trials by such organizations as the FDA.	Discussed roles and competencies of corporate clinical nurse educator (1,2), healthcare reform and involvement with large organizations (4)	USA
576	Nicolette, LH	1,2,4	Other Documents	Nader	Newkirk	This article discusses the need for a QA project in graduate CNS education curriculum. This is practiced at UT Health Science Center in San Antonio, which offers a CNS with a periop specialty. Provides a list of QA activities that relate to the sub roles of the CNS. Mentions that most CNS job descriptions do not mention QA. However, CNS do QA in all aspects of their job providing subjective and objective data. The article then goes on to describe	Role of the CNS in QA (1), graduate level QA projects and importance of it in the curriculum (3), organizational tools (4)	USA
577	Noll, ML	1,3,4	Other Documents	Nader	Newkirk			

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578	Norbeck, JS		Other Documents	1,3,4		Implementation of QA projects at the graduate level and discusses the importance of incorporating tools such as JCAHO monitoring and evaluation 10 step process. The article closes by discussing the importance of developing projects at the graduate level that allow students to gain a realistic expectation of the CNS roles.	This article discusses graduate nursing education in the US. The AACN produced a document to guide graduate education curriculum in the US. Roles of both the CNS and NP are generically discussed and it mentions that CNS curriculum is changing to meet the healthcare reform. The task force created a conceptual model for graduate education which includes core classes, clinical core classes, and specialty curricula. Indirect care masters were not expected to have clinical or specialty curricula. At the writing of this article CNSs were the only group that had not developed written standards for their programs. The graduate curriculum is discussed in detail. It is mentioned that NPs applications have increased overwhelmingly in comparison to CNS applications. It is believed that this is due to the concern that CNSs will not	Generically mentions roles of CNS/NP (1), graduate education curriculum (3), creation of curriculum requirements by AACN Hong Kong

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						have a job in the future due to healthcare reform. The article closes by discussing challenges in APN education to include limited academic sites as well as limited clinical sites.		
581	Northrup-Snyder, K	1,3, 4	Other Documents	Nader	Newkirk	This is a short article discussing the attempt made by the Oregon State board of nursing to pursue legislation that would regulate CNS practice. Their first attempt was unsuccessful due to a lack of understanding by both the government and the nurses themselves in regards to the functions of CNSs. They go on to describe the roles and functions of the CNS and discuss that they have many specialties. It closes by saying that they will reattempt to pursue regulation at the next legislative session and are encouraging nurses to understand/learn the role of the CNS.	Role of the CNS (1), masters prepared (3), Oregon state board of nursing meeting with government for CNS regulation (4)	USA
582	Northrup-Snyder, K	1,4	Other Documents	Nader	Newkirk	This is an article that discusses the importance of APNs marketing their role. The role has to be defined prior to marketing. Marketing means to determine your customers needs and meet or exceed those expectations. This can be done through quality management and outcome measurement. Several examples of the CNS doing quality management are discussed.	Roles of the CNS (1), marketing to organization (4)	USA

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583	Nuccio, SA	1,2,4	Descriptive	Nader	Newkirk	This descriptive study was looking at the perceptions of the CNS role and factors that influence it. The individuals interviewed by this study were staff nurses. Role ambiguity is discussed in detail. Conclusion of the study indicated that the traditional roles of the CNS were agreed upon by staff nurses. They find a need for resources in specialized care rather than routine. They also felt the CNS played a strong role in research and creation of policy and procedure. It was stated that the CNS needs to be visible especially when first arriving at a unit. This is done by assisting in direct patient care.	Roles and competencies of CNS (1,2) staff nurses view of CNS (4)	USA
584	O'Malley, P	1,2	Other Documents	Nader	Newkirk	This is the first article I have read that is clinical/biological in nature. It is written by a PCNS and it is discussing pre and post-operative beta-blockade to reduce mortality and morbidity in noncardiac patients. It discusses in detail the beta blockers in surgical patients, mech of action, risks and side effects, and evidence for use. She mentions that the CNS should have a detailed knowledge of the autonomic nervous system as well as the action of each drug. Prescribing is mentioned, however, it is ambiguous if she is referring to the CNS. Implementation of a beta-blocker protocol instituted by	Role of the CNS as pharmacology consultant (1), competencies in pharm and physiology as well as prescribing (2)	USA

BIB NUMBER	STUDY AUTHOR	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
585	O'Malley, P	2,4	Editorial	Nader Newkirk	This is a UK article that states that an IC nurse shares several qualities with a CNS. It starts by discussing the RCN and the UKCC and their differences in educational requirements for advanced practice. It is mentioned that some specialists do not need a degree. It then goes on to question the need for advanced education and that practical knowledge of nurses is equally important. It also mentions that admin and IC doctors do not care about educational level of specialist nursing. It then goes on to compare an IC nurse with all the sub roles of the CNS discussing how the IC fills these roles. The IC nurse states that they have a few similarities to the Np but mostly to the CNS. It closes by saying that the country is trying to Americanize the roles of advanced practice but the governing nursing bodies are	Competencies of the CNS in regards to prescriptive authority (2) legislation regarding prescriptive authority and alternative methods (4)	USA
586	Ormond-Walshe, SE	1,3,4	Other Documents	Nader Newkirk	Roles of the IC nurse in comparison to the CNS (1), educational requirements for advanced practice (3), UKCC and RCN guideline for practice (4)	UK	

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587	Ormond-Walsh, SE					This article is written in the UK by an IC nurse, who in their country is often found to be the same or similar to a CNS. She utilized this paper to compare and contrast the differences of a CNS and NP in the UK. She discusses all the typical subroles as well as the American requirement to be called a CNS to include certification and graduate education. She compares the CNS skills to that of a "ward sister" although it is not described what that is. She also mentions that The RCN, which is one of their regulating bodies says that any nurse involved in clinical and teaching roles is considered a "specialist". She describes the role of the NP and then states that the NP is an advanced practice nurse and the CNS is not. She also believes that American literature defines the NP as a master prepared CNS. Further differences are discussed such as the clientele of each nurse. The NP role of replacing physicians is discussed as well as the CNS being pt focused and she describes their focus as being similar to the RN. She believes that the RN, CNS, and NP roles are all blurred. She closes by stating that the roles are blurred but feels that educating, intersection with	not following suit.	Discusses roles of CNS/NP (1), educational requirements (3), certification (5)	UK

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588	Owens, JK					Discusses web-based networking with practicing CNSs to assist the future CNS in role assimilation. Questions that the students proposed included, title protection, certification, career trajectory, future trends for the CNS, and interviewing tips. The author utilized the guidelines from the Statement on Clinical Nurse Specialist Practice and Education. A CNS program needs to provide didactic content and anticipatory guidance for students to assume the role. Additional it is recommended by the NACNS that CNS programs utilize CNS preceptors to exemplify competencies and role socialization. Structuring the online discussion is mentioned. The advice from the experts is then presented. State regulatory issues and the lack of certification exams as well as the numerous organizations offering exams was mentioned. When interviewing or negotiating a position, awareness of the financial impact of the CNS was imperative as well as adapting the role to healthcare market demands. Opinions on NP/CNS mergers were discussed as well as the importance of a CNS having	The role and competencies (prescriptive ability) (1,2), educational curriculum (3), marketing the role to admin and adapting to reform (4), certification (5)	USA

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589	Page, NE	Other Documents	1, 4	Nader	Newkirk	I utilized this article for one of my papers last year. It discusses Kramers phases of reality shock and provides strategies for implementation of the role in each of these phases. A review of the literature is provided and states that there are very few articles discussing implementation of the role. Kramers model discusses the phases new nurses go through during their adjustment period. During the honeymoon phase it is recommended that the most imp role is that of the clinician. Additionally networking and interaction with administrator with weekly appts to discuss projects/unit needs. THe shock/rejection phase recommends continued marketing of the CNS role as well as narrowing down focus. It is also recommended to keep a portfolio of projects to prove worth of CNS. The recovery phase allows more autonomy but still involves marketing to admin. The resolution role is the final role and includes marketing the CNS to the community. The article closes by discussing the importance of admin support to successful CNS implementation, visibility to staff nurses, and issues with the imposter phenomenon which is seen with CNSSs	Role implementation (1), importance of admin involvement (4)	USA

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						overseeing units not in their specialty.		
						This article discusses advantages and disadvantages of NP/CNS integration. Educational background and roles of the CNS and NP are discussed. One of the advantages is increasing the political clout of APNs. The disadvantage on the NP front is if they merge they are concerned that reimbursement as well as acceptance by the public will be in jeopardy. Another concern is who will support the bedside nurse. Also combining both roles will be too many responsibilities and which ones will be eliminated. One recommendation is to delete the education and research sub roles. The article continues by discussing APNs in medical roles and the forces for role merger.	Roles of CNS/NP (1), educational curriculum (3), healthcare reform and forces behind merger (4)	USA
590	Page, NE	1,3,4	Other Documents	Nader	Newkirk	This is the first article that I have seen that mentions how the CNS do not need to merge but remain in their roles and complement each other. Roles of the NP and CNS are discussed. A practice setting in a pediatric clinic are discussed and the workings of the CNS and NP and each of their competencies/roles are mentioned. They found that each had something to provide and that utilizing both enhanced patient care and the	Roles discussed (1), competencies provided (2), betterment of the system (4)	USA
591	Page, NE	1,2,4	Other Documents	Nader	Newkirk			

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
						Provides role clarification of the psych CNS as well as discussing psych care provided by FNPs. She discusses the increase in NPs and decreases in CNS due to healthcare reform. She also discusses the psych Np and states that they were developed due to biological basis in mental illness. It was theoretically believed the NP provided physical care and the CNS delivered psychotherapy. She discusses education and mentions that the APN in psych is educated to make assessments at a comprehensive level. Stating that both are capable of diagnostic and psychopharmacologic care. She feels that people are trying to separate the "psyche" from the "soma". She then discusses concern with the FNP providing psych care to a patient and discusses their lack of training.	Role of the CNS/NP (1), competencies (2), education (3), healthcare reform (4)	USA
592	Paisley, LM	1,2, 3, 4	Other Documents	Nader	Newkirk	This article is comparing APNs in the US and the UK. Blending of the CNS/NP role in Kentucky is discussed but the majority of the article is discussing NP. Educational level of ANPs are discussed and it is stated that masters level education in the US is similar to their basic education in the UK. Curriculum needs are discussed as well as	Blended CNS/NP role (1) education and curriculum (3) consumer demand (4)	UK
593	Paniagua, H	1,3,4	Other Documents	Nader	Newkirk			

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594	Papenhausen, JL					consumer demand affecting nursing.		
596	Parr, MBE		Other Documents	1,2,3,4	Nader	Newkirk	This editorial discusses the removal of CNSs from Univ. of Virginia Med Center. She is encouraging that all CNS prove their effectiveness by providing admin documentation of cost savings as well as unique offerings contributed by the CNS. A table is provided that gives variables to measure CNS effectiveness.	Marketing to admin (4) USA
597	Paul, SA		Other Documents	1,3,4	Nader	Newkirk	This article gives a definition of managed care and discusses its effects on the roles of two CNSs. The role/competencies of the APN are discussed as well as educational degree. The different focuses that are taken on by two pulmonary CNS due to healthcare reform are discussed in detail looking at different sub roles.	Roles and competencies (1,2) educational level of APNs (3), managed care and its effect on the CNS (4) USA
							This article definitely was written in the early 90's. Nursing is described as a mainly female subservient and fearful profession. She feels that this is encouraged by tv showing nursing in sexy roles, the nursing shortages, as well as the "paternalistic healthcare system". She believes that the CNS is the answer to remodeling the image of nursing. The CNS is adept at being the change agent. Their education and expertise are a combination that enables them to assist in this remodeling.	The role of the CNS as change agent (1), education to increase the view of nursing as a profession (3), nursings value to society and healthcare organizations (4) USA

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						The CNS can assist nurses in the attainment of power, political activism, pursuing graduate education, cohesion, increased opportunity for publication and public speaking, and selling the positive image of nursing.		
						The flexibility of the CNS role makes it extremely vulnerable to being removed from numerous healthcare facilities. A CNS task force was organized at Vanderbilt Univ. Medical Center to evaluate the current role of the CNS and suggest role changes to include a financial analysis of care. There were numerous different types of CNS roles at this facility which gave the impression of no clear focus for the CNS due to their versatility. It was determined that one of the most effective utilizations of the CNS at this university was as case manager. Another recommendation was for the CNS to consider the role of the tertiary NP. Educational requirements as well as roles/competencies were discussed. The article concludes stating that they believe this is meets the challenge of providing care in a cost-effective manner.	Role of the CNS and TCNP discussed (1), competencies of the TCNP (2), educational curriculum (3), healthcare reform (4)	USA
598	Payne, JL	1,2,3,4	Other Documents	Nader	Newkirk	This article is very similar to many of the articles on CNSs in the UK. The differences between the UKCC and	Roles of the CNS (1), education (3), UKCC and organizations (4)	Australia
599	Pearson, A	1,3,4	Other Documents	Nader	Newkirk			

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						American nursing bodies interpretation of the APN, specifically the CNS. The roles, competencies, and cost-effectiveness of the CNS are discussed. The variability in scope of practice as well as the lack of common nomenclature has made it difficult to evaluate the roles of APNs. A model was created to evaluate advanced practice that looks at structure/process, outcomes, and cost.		
600	Pearson, C	1,2,3,4	Descriptive	Nader	Newkirk	The creation of a inflammatory bowel disease CNS was presented. It was created due to workload and quality of care. There was minimal literature as evidence of successful IBD CNS practice, however, numerous other CNS chronic disease management jobs were effective. Patient focus groups and questionnaires were utilized to determine the need for a IBD CNS focus. Academic preparation of the IBD CNS was discussed to include preceptorship. New roles included telephone consultation, outpatient care, immunosuppressive therapy, and inpatient care. Another questionnaire and focus group following the change indicated positive outcomes.	Roles and competencies of the IBD CNS (1,2), education (3), improvement of organization (4)	UK
601	Peglow, DM	1,4	Other Documents	Nader	Newkirk	This article discusses the role of the CNS and how to evaluate their practice. Three different types of evaluation	Roles of the CNS (1), Organization and need for patient focused outcomes (4)	USA

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						methods are discussed such as structure evaluation, process evaluation, and outcome evaluation. Pros and cons for each are listed. The author suggests utilizing an evaluation method called process-outcome evaluation. This tool is discussed in detail to include development, description, and results of its implementation. The use of this tool enabled admin to look at the CNS and their involvement in positive patient outcomes.		
602	Perry, SE	1,3,4	Other Documents	Nader	Newkirk	This article discusses the role of the CNS as an expert witness/consultant. They are described as perfect for the job due to experience and education, credentialing, publication, and professional membership association. It goes on to discuss that the CNS should be in current practice to be an expert witness. A CNS gets this opportunity through recommendation from other nurses in the legal system, as well as nursing associations. The whole legal process is discussed and closes with the reactions of being a CNS expert witness.	Role of CNS as expert witness (1), educational background mentioned (3), legal system and nursing standards (4)	USA
603	Peterson, K	1,3,4,5	Other Documents	Nader	Newkirk	Discusses roles of the CNS and NP as well as educational curriculum for each. APNs are a scarce resource and their value is appreciated by admin and nurse managers.	Role of the CNS/NP (1), educational curriculum for each (3), admin/organizational support (4), need for credentialing (5)	USA

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604	Phillips, A					This article discusses the intuitive sense that is needed in addition to education to become a "higher level" expert. The definition and roles of the CNS are discussed and compared from the UK to the US. The reshaping of the roles of the CNS due to changes in healthcare and the governance agenda are discussed. The article then goes on to discuss intuition and how it is difficult to articulate, however, nurses with experience seem to have that 6th sense. The author feels that part of the definition of the "Higher level" nurse should include intuition. She feels that the diabetic spec. nurse has this intuition.	Roles of the CNS (1), education (3), UKCC and clinical governance (4)	UK	
605	Phipps, K		Other Documents	1,3,4	Nader	Newkirk	This was a descriptive study that looked at the use of unit-based CNSs in improving patient care. It was believed that it would provide nursing staff with on-site clinical expertise and role modeling. The roles of the CNS are discussed as well as a literature review of CNS. One study discussed the different perceptions of CNS roles dependent on years of experience of the staff nurse. Questionnaires were passed	Roles of the CNS discussed (1) competencies (2), nurse manager and organization (4)	USA

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607	Pickersgill, F	1,2,3,4	Other Documents	Nader	Newkirk	<p>out to the techs, nurses, and nurse managers one year after institution of the CNS. The comments were pro-CNS. Competencies were looked at and the five most frequent useful competencies of the CNS fell under the role of consultant with research and monitoring coming in at the end. Also, direct patient care by the CNS was not favored due to limited access to their services when in this role.</p> <p>However the nurse managers were more in favor of occasional direct patient care responsibilities due to decreased work on staff, role model for staff nurses, monitor of nursing standards, and support.</p>	<p>This is an article from the UK that is discussing the description and differences of CNSs and NPs. They describe each as being necessary and complementary. However, their needs to be agreement over definitions, education, and regulation. Nurse practitioners are described as a step above CNSs in regards to advanced practice. Key features and characteristics of NPs and CNSs are discussed as well as the US discussion on NP practice. NP education in the UK is discussed and closes by discussing that CNSs prepare the ground for a nurse to become an NP.</p>	<p>Role and competencies of the CNS and NP (1,2) education of NP in Liverpool (3), UKCC and US office of technology assessment (4)</p> <p>UK</p>

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608	Pinelli, JM	1,2,3,4,5	Descriptive	Nader	Newkirk	This article is a lengthy pro-merger article. It discusses the evolution of both the CNS and NP to include educational differences. The changes in healthcare and its effects on the roles of the CNS and NP are discussed. A literature review is conducted that lists several pro and cons for the merger. Areas of discussion include titling, education, location, bodies of knowledge, and roles utilized. It is discussed that the merging of the CNS and NP professional bodies should send a strong message to the healthcare community. Additionally it discusses horizontal violence amongst different nursing groups as a problem towards a unified front. It concludes describing the merger as a match made in heaven.	Roles and competencies of the CNS/NP (1,2), educational curriculum for the merger as well as current differences (3), professional bodies, healthcare market (4) credentialing (5)	Canada
609	Pinkney-Atkinson, VJ	1,3,4	Qualitative	Nader	Newkirk	This is a study conducted in a South African Outpatient clinic which is looking at the nature of ambulatory nursing work between CNS and staff nurse. It stated that 75% of the staff nursing workload was non-nursing activities. 69% of the CNS workload was professional nursing activities. It stated that CNSs found the non-nursing or "smoothing" functions of the clinic to be necessary but is not a high priority for the CNS. A discussion of handmaidens is introduced with the CNS being	Generic discussing of role (1), education mentioned with no specifics (3), physician organizations (4)	South Africa

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						This article describes the graduate curriculum of a rural NP and CNS at NAU. It is stated at the beginning of the article that the CNS/NP role are complementary but different. The excessive roles that would be needed to fulfill with a merger is mentioned. Both the CNS and NP roles and competencies are discussed. Each track of the graduate curriculum is discussed noting the core curriculum as well as the specialty specific courses to include clinical hours required. The curriculum follows the guidelines set by the National Organization of NP faculties and the statement on CNS practice and education by the NACNS. All students have a final course on transitioning into advanced practice. The differentiated roles and education are broken down and described into managing client health and illness, healthcare delivery systems, collaboration/consultation, professionalism, teaching/coaching, and quality healthcare monitoring.	Roles and competencies of the CNS/NP are discussed (1,2), educational curriculum (3), cost-effectiveness in healthcare (4), classes taken to assist in certification (5)	Does not prescribe, although she may have the competency but not the authority (2), third party	USA
610	Plager, KA	1,2,3,4,5	Other Documents	Nader	Newkirk	This was a short article that discussed a psych CNS in private practice. She discusses the pros and cons of			
611	Polick, T	2,4	Other Documents	Nader	Newkirk				

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						Owning your own business. She mentions that patients are seen much quicker by her office; however, she has no prescriptive authority so she has to call a physician to prescribe. She does receive third party reimbursement.	reimbursement (4)	
612	Ponte, PR	1,3,4	Descriptive	Nader	Newkirk	This article provided the results of a descriptive study on CNS opinions on their role prior to and after a revision of their role due to healthcare reform. Their traditional role was described as mainly consultative. The revision was mainly controlled by a nurse executive team with some input by CNSSs. Their revision was to a more patient-focused care with outcome measures. Their were much more involved in direct-patient care and unit level care than before. The most glaring piece in this article was the control of change by the nurse executive team and not the CNSSs. It is unapparent if it was due to micro-managing or lack of knowledge/motivation by the CNSSs.	Role of the CNS (1), desire for masters prepared nurses (3) healthcare reform and nurse executive led revision of CNS role (4)	USA
613	Ponto, J	1,5	Other Documents	Nader	Newkirk	This editorial was discussing the new role-specific certification exams for oncology CNS and NP. The study on role similarities and differences confirmed that the CNS and NPs are complementary but different, therefore two different certification exams were	Role differences mentioned (1), certification board requirements (5)	USA

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614	Ponto, J					created. Eligibility for certification is discussed as well as the inability to be grandfathered into eligibility.	Very interesting article discussing the task force put together for APRN legislation. Minnesota changed their def of an APRN to include an RN that is certified by a nat'l nurse certification organization. The CNS practice is defined and include non-pharmacologic treatment only. Later on in the article, it states that previously only psych CNSs could prescribe, however, thru set criteria, any CNS can prescribe. Numerous issues were discussed to include masters preparedness to sit for a certification as well as the requirement to sit for a certification exam. Issues for the nurse mid-wives included no requirement for grad education. Issues for the CNS included lack of specialty cert. exams. A three year transition period was ultimately granted for this accomplishment. A review process was recommended for those CNSs that have no specialty exam. The criteria are outlined in the article. Collaboration and compromise with physician groups are discussed. Choosing a certification body for the CNS exams was mentioned with specific criteria for those organizations. One of	Roles and competencies were mentioned to include prescribing (1) masters prepared or not discussed (3) Minn board of nursing and physician organizations (4), certification bodies and exams (5)	USA

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						<p>the stipulations for the exams was that it should focus on entry level CNSs instead of advanced. Lessons learned were discussed and the CNSs in the task force felt that they were able to articulate their role to other APRNs and receive greater appreciation.</p>		
615	Poole, K	1,2,3,4	Descriptive	Nader	Newkirk	<p>This article appeared to be a combination of a review of the literature and the role of the CNS in a breast cancer center. The role of the CNS was discussed, however the title CNS is often interchanged with the title "breast specialist". This interchanging of titles seems common in English literature. Education levels are also discussed with a comment given that academic achievement is not currently a requirement for advanced practice specialty nursing in the UK. The article goes on to say that there is a need for a breast specialist in breast cancer centers and that their role needs to be defined. They discuss this specialist and what they contribute to health promotion, psych support, and nurse-led clinics.</p>	<p>Roles of the CNS (1) competencies mentioned (2) educational level required for title (3), healthcare changes in the UK and awareness of breast cancer epidemic by public (4)</p>	UK
616	Popejoy, LL	1,4	Quantitative	Nader	Newkirk	<p>This article discussed a study that looked at QI issues that contribute to problems in nursing homes. A Geriatric CNS led the study and held a conference to discuss these issues with staff. This included interpretation of their QI</p>	<p>Discusses the role of researcher, consultant, and clinical expert (1), legislation regarding quality of patient care and QI improvements (4)</p>	USA

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						reports as well as helping them understand how to utilize the data to improve patient care. The GCNS acted as a consultant, researcher, and clinical expert. The article discusses how the GCNS was received and the benefits of her expertise		
617	Portillo, CJ	1,2,3,4	Other Documents	Nader	Newkirk	This article is describing a CNS program in California educating nurses to become CNSS in home health care. It was determined that their was a huge gap between the nurses providing care in the homes and the homecare nurse administrator. It was felt that not enough mentoring or clinical expertise was involved. The CNS appears to be the answer to this. Also, the CNS is able to provide outcome base patient care to prove their cost-worthiness. The article goes on to describe the curriculum of both the homecare CNS and NP as well as the roles of each.	Roles and competencies of the CNS/NP (1,2), educational curriculum (3) healthcare reform and need for outcome based care to prove cost-effectiveness (4)	USA
619	Prevost, SS	1,4	Other Documents	Nader	Newkirk	This article discussed the need for CNSS to find ways to prove their value and cost-effectiveness. It discusses the importance of the CNS to be able to communicate their role and market themselves	Importance of being able to articulate your role as CNS (1) need to provide outcome based evidence of cost-savings (4)	USA

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621	Prichard, LC	1,3,4	Descriptive	Nader	Newkirk	This article defines the difference between nursing research and bedside nursing research. Nursing research is seen more frequently in academia and is often not even read by bedside nurses. However, bedside nursing research is conducted by the staff nurse and an individual such as a CNS looking at issues that effect daily nursing care. With the educational background of a CNS they are the perfect candidate to initiate this type of research. The article then gives three case studies discussing CNS led bedside nursing research and the positive outcome based care that resulted.	Role of CNS as researcher, educator, and change agent (1), educational background (3) interest of staff nursing organizations in research and results of outcome based care (4)	USA
622	Prieto, J	1,3,4	Other Documents	Nader	Newkirk	This is an article from the UK that is comparing the ICN to a CNS. This author feels that they are comparable and utilizes Hamric's multi-faceted framework looking at the sub roles and compares ICN and CNS activities. It is mentioned	Compares roles of CNS and ICN (1) educational requirements per Hamric and the ICN Association (3) role ambiguity throughout the organization (4)	UK

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						that in the UK the title of CNS is given inconsistently to experienced nurses who consider themselves to be specialized. In defense of the ICN she mentions that their professional organization formed an education committee that identified the need for an advanced course at diploma/degree level. This level of education is not defined or compared to the US equivalent in the article.	This article discusses the positive benefit that an APN can provide to patients mental health, specifically those in underserved populations. Healthy People 2010 is discussed in regards to their focus on mental health care provided in the primary care setting. FNPs who do not have training in mental health should consult either a psych NP or CNS for assistance. The rest of the article discusses the positive impact of APNs with underserved populations who provide both physical and mental healthcare. The majority of the article mentions NPs and CNSs are sporadically mentioned.	Roles and competencies of APN discussed (1,2) Healthy People 2010 encouraging healthcare reform (4)	USA
626	Puskar, KR	1, 2, 4	Descriptive	Nader	Newkirk	This article is a pro-merger article and discusses one nurses experience restructuring her traditional CVCNS role to a CV APRN. The article starts out by stating that the traditional CNS role is	Roles of the CNS discussed (1) pharmacology and prescriptive authority (2), pharm education (3) healthcare reform, data capturing for workload	USA	
627	Quall, SJ	1,2,3,4,5	Other Documents	Nader	Newkirk				

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628	Radford, M					<p>out of date due to the healthcare reform. She discusses her transformation by taking pharm classes and obtaining prescriptive authority. Also, she utilized an APRN encounter form that utilized CPT and ICD-9 codes that allowed her to capture her workload. She also discussed the importance of certification in their APRN specialty is important in both the professional and legal arena.</p> <p>The article closes by stating that the CNS in their restructured role is an ideal candidate to assist nurses in their transition from in-patient to other arenas of healthcare.</p>	<p>management (4) importance of certification (5)</p>	<p>This article was from Britain and discussed the role of a CNS in the emergency surgery and perioperative environment. Their description of the role sounds very similar to pre-op visits to include physical assessments. The published the numerical evidence of the positive results form the CNS to include surgical delays, number of days prior to discharge, usage of OR suites, and the number of on-call cases being completed during off-hours due to prior delays in surgery.</p> <p>They discuss the benefit of the CNS to family in regards to being the interface between the organization and the family. They close by</p>	<p>Role and competencies of the CNS (1,2) advanced health assessment education (3), benefit to organization through more effective efficient surgical experience (4)</p>	UK

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						discussing the addition of more CNSs that will be trained in advanced health assessment.		
						This study looked at a CNS population and sent out a questionnaire that asked CNSs what admin duties they were currently doing, what they saw in the future regarding admin, and did their graduate curriculum prepare them for their admin role. The results are listed with a conclusion that the CNS graduate curriculum should remain clinically focused. However, CNSs that desire to become admin should take a post-masters degree program in nursing admin to allow them to function effectively as nurse execs or middle managers. University of Rochester has also developed a MSN-MBA joint degree that allows nursing administrators to be both clinically and business minded. This is beneficial in the changing healthcare environment.	Role of admin (1), post-masters program and joint MSN-MBA (3), changing healthcare (4)	USA
629	Radke, K	1,3,4	Descriptive	Nader	Newkirk	This is a study that looked at current educational responsibilities of CNSs, graduate curriculum in regards to education, and educational opportunities since graduation. The findings indicated that nurses found consultation with other healthcare professionals as their most important function. Teaching nursing in	Role as educator discussed (1) graduate curriculum (3) administration perception of CNS educational role (4)	USA
630	Radke, KJ	1,3,4	Descriptive	Nader	Newkirk			

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						academia was also important but rated lower by CNSs. Nursing admin was surveyed as well and they agreed that teaching was an important role for the CNS. The final thought on graduate preparation for these roles was that the CNS curriculum does not have any room for further study. However, a post-masters certificate was the answer. The article closes by discussing the need for nursing education research.		
632	Rago, KA	1,4	Other Documents	Nader	Newkirk	This article discusses contributions made by the CNS in the managed care environment. It discusses quality improvement, patient management, and consultation. Teaching nurses to provide effective patient care increases cost-effectiveness.	Role of the CNS (1) healthcare reform and cost-effectiveness (4)	USA
633	Raja-Jones, H	1,3,4	Descriptive	Nader	Newkirk	This study was a literature review that was looking at the similarities between CNSs and research nurses in the UK. The role of the research nurse and CNS were discussed as well as issues with role confusion. The UKCC and their interpretation of CNS was discussed and compared to the CNS. The UK does not have the same educational requirement for Masters as in the US. Emphasis on clinical practice both prior to and after becoming a CNS was discussed. The findings of the	Roles of the CNS and research nurse (1) educational requirements (3), UKCC/ANA definitions	UK

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						study included lack of definition of CNS as well as educational differences. Also, the conclusion was that there was not enough evidence that the CNS and research nurse were interchangeable.		
634	Ralko, J	1,3	Editorial	Nader	Newkirk	Editorial describing the job of a CNS in a town in Canada. She states that she is not a nurse educator, but a CNS. She describes her role as direct patient care, teaching, and research. She was a member of the first MSN class in Canada.	Discusses roles of CNS in Canada (1) educational preparation (3)	Canada
636	Rasch, RFR	1,2,3,4	Other Documents	Nader	Newkirk	This article is a pro-merger article that discusses the pros and cons of CNS and NP roles as well as their graduate curriculum. Competencies are discussed to include prescriptive authority and assessment/minor surgery skills for the CNS. The history of both were mentioned with the NP being described as a crusader that was forced to define their role in a physicians world whereas the CNSs have never truly been successful in defining their role to both themselves and the public. Educational curricula was discussed and stated that CNS programs are usually hodge podge and thrown together according to the fad of the moment. The article closes by discussing that there is not enough proof to continue the two separate APN roles and	Roles of CNS and NP (1) competencies such as prescriptive capabilities and health assessment skills (2) educational curricula (3) healthcare reform and acceptance by the public towards certain roles (4)	USA

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						that they should be merged. Authors don't believe that the NP should supplant the CNS.		
						Discusses differences in educational background of APNs throughout the US. Also discusses variability in tracking of APNs state to state. The roles and competencies of CNSs and NPs are discussed. It was mentioned that almost all state boards require a masters degree for CNSs, however, a study of 100,000 APNs indicated that only 38.9% were educated at that level compared to CNMs who were educated at 70%.	Roles and competencies of CNS and NP (1,2) educational requirements and curricula (3) healthcare reform and state nursing boards (4) certification as regulatory body (5)	Role of the CNS (1) educational curricula (3) admin, public, and legislative need for explanation of roles (4) USA
638	Ray, GL	1, 2, 3,4,5	Descriptive	Nader	Newkirk	Importance of certification is mentioned for regulatory purposes. Article closes by mentioning the need to revamp education to meet healthcare reform.	Discusses the importance of role delineation for the CNS to be successful. Confusion of the role by both the CNS and admin can lead to expectations that seem inappropriate. CNSs need to be able to articulate their role to others. Role identity is accomplished through identification of the specialty	Role of the CNS (1) educational curricula (3) admin, public, and legislative need for explanation of roles (4) USA
640	Redekopp, MA	1,3,4	Other Documents	Nader	Newkirk			

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						area, development of the role thru insight into the clinical setting, distinction from other APN roles, and establishing role identity through determining which graduate education program to acquire. The article closes by discussing the importance of explaining the role of the CNS to other nurses, admin, faculty, the public, and legislators.		
642	Reeves-Hoche, MK	2, 4	Editorial	Nader	Newkirk	Discusses different methods of acquiring privileges to practice in the hosp. These include medical policy board review, comparison with nurse practice act privileges, and requests by physician groups to lessen workload and increase competency based skills of CNS (i.e. invasive procedures).	Competencies discussed (2) physician and state board of nursing organizations (4)	USA
643	Ricciardi, E	1, 2, 4	Other Documents	Nader	Newkirk	Discusses the role of the CNS as a QA facilitator. Discusses how all the roles of the CNS are utilized in the QA process. Their role on the committee is mentioned as the individual who prioritized clinical issues, evaluative measures, and corrective action. They are ensuring accordance with standards of practice and ensuring coordination of nursing QA activities hospital wide. Nine functions/competencies of the CNS in QA activities listed.	Role of the CNS in QA (1) competencies involved in QA (2) mediator between nursing and organization/committee (4)	USA
644	Richmond, TS	1, 4, 5	Other Documents	Nader	Newkirk	Article lists 8 characteristics that create an APN friendly culture. Discusses current organizational clarity and congruence with CNS (4)	Role clarity (1), organizational clarity and congruence with CNS (4)	USA

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645	Ridley, J	1,2,4	Descriptive	Nader	Newkirk	This study looked at key job activities of 5 Nephrology NP/CNPs and determined if there was any variability in their practice. An average of 72% of their time was devoted to clinical practice followed by education (6%) research (4%) and publications/professional leadership (2%). The findings indicated that there was less variability in the clinical and support system domains than anticipated. The study also acknowledged that individual APNs will place a focus on different domains according to specialty focus and patient population. The study also indicated that physicians and systems support affected NP/CNPs practice.	Roles and competencies of CNS/NP (1) physicians/support systems that affect practice (4)	Canada
646	Rizzuto, C	1,2,4	Other Documents	Nader	Newkirk	This article focuses on the importance of documenting CNS roles and patient outcomes. Healthcare reform is forcing the CNS to prove	Roles and competencies mentioned (1,2) impact of healthcare reform and need for cost-effective measures (4)	USA

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						their cost-worthiness. This is difficult to do due to the various implementations and complexity of the CNS role. Roles and competencies of the CNS are discussed. The role of consultation was a major focus and discussed the importance of documenting both the process and the outcomes of CNS consultation.		
						A project group got together to create a better definition of the CNS. They felt that in the UK there was no general agreement on the competencies and roles of the CNS additionally there was misuse of the title. It was stated that in the UK the CNS positions are created by medical staff. Their final product discussed the core requirements of the CNS role to include education level, maintenance of competence, and assessment of competence. It was mentioned that all individuals that call themselves CNS should be educated to degree level (?), have a minimum of 5 years experience as an RN, extensive experience in their clinical area, hold an ENB course (?), and obtain teaching qualifications. Until those were met, they could only be referred to as a "sister in specialist care".	Discussed role and competency (1,2) education level (3), posts controlled by medical staff	UK
647	Robb, E		Other Documents	Nader	Newkirk	This article from the UK was looking at NPs and their roles,	Roles of the NP (1) lack of specific educational	UK
648	Roberts-Davis, M		1,3,4	Descriptive	Nader	Newkirk		

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649	Roberts-Davis, M					<p>programs and preparation. Part of the study utilized interviews to gain information. It was found that numerous individuals considered the NP role to be a composite of both specialist and advanced practice. It was believed that the NP which is considered advanced practice was a step above specialist practice. Another description of the NP was "specialist plus". However some individuals felt that the NP fell somewhere between specialist and advanced practice. The factors that have impacted the roles of nurses in the UK include organizational changes in the NHS, policy changes , nursing initiatives, and managed care.</p> <p>Developments in educational provisions have affected nursing as well especially since there is no formal specific prep for emerging roles.</p>	<p>requirements (3) systems/organizations effect on emerging nursing roles (4)</p>	<p>This study was based on the Dept of Health's (England) evaluation of NP preparation. A Delphi study was used to reach a consensus of views amongst clinical nurses, educators, purchasers of healthcare, providers, and professional/government bodies in regards to parameters and competencies of the NP. Once their was an agreement, these competencies were measured</p>	<p>Roles (1) competencies mentioned (2) assessment of educational programs for the NP (3) need for agreement across different types of nursing (i.e. educators, admin)</p>	UK

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651	Rogers, A					against various NP programs. The majority of the competencies approved were found to be "nursing competencies" as seen in the CNS role. However, NPs were also found to need medical management skills. It was acknowledged that some CNSs utilize medical management as well.	This article discusses the roles and competencies that are utilized in a Alzheimers clinic in Canada. The roles identified are direct patient and family care, clinic facilitator, community developer, and researcher. It is mentioned that the CNS and the clinic physician have overlapping roles.	Roles and competencies (1,2)	Canada
654	Rose, S		Other Documents	Nader	Newkirk	This is a very interesting article. It starts by discussing the history of the APN and moves into the new millennium. It mentions the numerous professional bodies that are attempting to decrease confusion and ensure quality educational preparation for the APN. The healthcare reform is discussed. Educational prep, credentialing and common denominators that define the APN are listed. The CNS is discussed in detail including competencies and spheres of influence. The NP role is discussed in detail as well. The differentiation of the NP	Roles and competencies (1,2) educational requirements (3) healthcare reform, professional bodies, and CNS impact on organization (4) credentialing (5)	USA	

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						and CNS are laid out. The article closes by discussing relevant issues such as fiscal constraints and the need for APNs to adapt and reform to these constraints as well as the unique role that each plays in patient care.		
655	Ross, M			1,2 (CNS non-period)	Editorial	Newkirk Cole	Author suggests that community health CNSs might blend roles with the adult NPs. CHCNS promote the health of the community via assessment and interdisciplinary collaboration. They institute programs and develop resources to meet community needs. Author believes there is a need to combine the expert primary care provider with the case manager competencies.	Roles and competencies discussed. CNS as practitioner and case manager USA
656	Rothaker-Peyton, SS						Defines CNS by using Ana definition. Credentialed by American Nurses Credentialing Center or other. Maine at 2003, did not have specialty of perioperative CNS. Excellence in practice by direct care, consultation, and interdisc collaboration. Assessment, Diagnosis, plan for care. Prescription of therapies. Maine doesn't allow medications. Education in basic nursing programs, master's, continuing education. Use research to improve care and collaborate with others. Design and direct clinical programs. Practice in variety of settings.	Roles and competencies discussed. Professional organizations and state governments influence the CNS. USA

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658	Rust, JE	1,2,3,4,5	Editorial	Nadler	Newkirk	This editorial is a advertisement for NACNS by the president. It discusses the benefits provided such as role competencies, outcomes, educational requirements, and provides a tool to articulate the CNS role to admin. Only applicable to our study as a tool or reference for the above stated issues.	Mentions role/competencies (1,2), education (3) administration (4) certification (5)	USA
659	Ryan, S	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	UK CNS are expert providers, educators, communicators, and researchers. Medical model on health organizations influences nurse specialist. Confusion about role because many in positions are not specialists. United Kingdom Central Council's Standards for Education and Practice Following Registration only require a "first level degree". States need for standardized preparation. Roles of the rheumatology specialist nurse include patient education, direct patient care, co-coordinator of services for patients(case manager), researcher.	Roles of the rheumatology specialist nurse include patient care, co-coordinator of services for patients(case manager), researcher. NOTE: great model for CNS practice in Figure 1	UK
660	Ryder, M	1,2,3,4,5 (CNS non-period)	Descriptive	Newkirk	Cole	Ireland has heart failure CNS. It is not master's prepared, but "higher diploma" requiring 3 days of education. Author recommended that Ireland seek the Advanced Nursing Practitioner to widen the role for heart failure advanced nurses. Master is required. All heart failure nurses are currently accredited as CNS	roles, competencies, and educational preparation are all mentioned. Outside influences, such as government organizations and professional organizations are mentioned.	Ireland

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661	Salussolia, M	1,3,4	Other Documents	Nader	Newkirk	This article describes a nurse in an ambulatory clinic as a GI malignancy CNS. She describes the advantages and disadvantages to working in ambulatory care and says that there is still role ambiguity. The ANA's Social Policy Statement discusses the importance of protecting the public and one way to do this is by providing nurses with expertise through education and certification. She closes the article by discussing educational curriculum that	Role hierarchy of nurses (1) education (3) UKCC (4) UK	USA
664	Sawyers, JE	1,2,3,4,5	Other Documents	Nader	Newkirk	Discuss role and competencies of GI CNS (1,2) education (3) physician interpretation of role (4) certification mentioned (5)		

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665	Scales, K	1,2 (CNS non-period)	Editorial	Newkirk	Cole	Debate between two nurses on whether CNSs are a hindrance to the general nurses. Scales recommends that CNSs complement the general nurses. Specific competencies include promoting the standardization of practices, developing policy, quality assurance, staff education, coordinating research, and expert clinical practice. Toogood takes the opposite approach and believes that specialty nursing is hindering the generalist by keeping their focus on direct patient care. She stated that specialists are not doing the original work of educating staff as was intended. Generalists may feel intimidated and demoralized by the specialists because they are busy doing the majority of nursing in regards to patient care.	Debate in the UK about the importance of the CNS and the roles of staff educator versus patient care providers.	UK
667	Schaefter, KM	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	Study showed that CNSs participate in scientific and humanistic caring, that they took care of patients, families, and the nursing staff. CNSs reported forming caring relationships with the above groups. All CNSs in the study were actively involved in research, but most were in the investigative mode. The role of the researcher was underutilized. All CNSs reported being involved in patient assessment, and	This study emphasized the roles of educator, consultant, expert clinician, and researcher.	USA

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						education. Sensing was a term used that in an unconscious reasoning process to help them plan their day. The CNSs emphasized the importance of managerial support of their roles. They role modeled their expert clinical skills to non-CNS nurses. The authors found the competencies of caring included creating new procedures/programs, working together with others, showing the way to other staff members, and taking care of the environment.		
668	Schaffner, R.J	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	Author describes an expanded role through shared governance. CNSs can participate in the institutions decision making. Activities that the CNS can take on are leadership in the SGO, resource person for professional development, communication skills for public relations, enlightening the institution and nurses about the standards of practice by various organizations, and identify clinical problems for a quality assurance project.	The institution has influenced the role of the CNS to increase nursing retention. The CNS role of educator, manager, and consultant are addressed.	USA
669	Scharer, K	1,2,3,4 (CNS non-period)	Descriptive	Newkirk	Cole	Newly educated blended CNS/NP psychiatric nurses reported experiences with the new roles. They reported positively that the primary care role and the clinical nurse specialist role worked well together. Collaboration with physicians went well overall.	Two organizations influenced the blended role of the psych CNS/NP. Roles were identified, especially direct patient care and consultation.	USA

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670	Scherer, YK					The blended curriculum that prepared them for their role was mentioned briefly. The master's degree program at University of South Carolina consists of 42-45 credit-hours and 840 clinical hours. The Board of Nursing of their state recognizes advanced practice and allows prescriptive authority. The South Carolina Department of Mental Health influenced the utilization of NPs by recently announcing replacing a number of physicians with NPs. Upon initial employment as a CNS/NP, all nurses had to negotiate their role in their institutions. This required competencies of assertiveness and negotiation skills. They utilized their case management skills as well as their direct primary care responsibilities. Cross consultation occurred in that both nurses and physicians utilized each other as necessary. Nurses reported satisfaction with their new blended role due mostly from their practice of holistic caring and great collegial relationships with others.	Nursing administrators who employed CCCNs ranked the role of expert clinician as the most important role of a Critical Care CNS. The manager role was ranked last. A list of activities under each	Article reports the American Association of Critical-Care Nurses are an organization that critical care CNSs look to for standards of practice. The five roles of the CNS were USA

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						role heading were ranked by nursing administrators. Recommendations by the authors were that CNSs maintain their clinical skills and also help to gain the support for their roles from nursing administration by proving their effectiveness in providing quality care. They also recommended that CNS students curriculum not include managerial courses, yet leadership courses instead.	evaluated in terms of importance by nursing administrators.	
671	Schneider, JK	1,2,4,5 (CNS non-period)	Descriptive	Newkirk	Newkirk	Cole	A comparison of the roles of	USA
673	Schroer, K	1,2,4,5 (CNS)	Descriptive	Newkirk	Newkirk	Cole	The roles of a CNS are	USA

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		non-period)				the CNS and NP were given and a recommendation that the roles be merged. Case management model was used to illustrate the ability to integrate both roles. The American Nurses Association Council of Clinical Nurse Specialists and the Council of Primary Health Care Nurse Practitioners merged in 1990. California nurses' Association in 1988 defined CNS's as master's prepared NPs. Case management encompasses health assessment; planning; procurement, delivery, and coordination of services; and monitoring patient's needs. CNSs can qualify for the CM role due to their clinical expertise, educational preparation, problem-solving skills, and knowledge of resources. Hospital Based Home Care (VA)'s case management program has components of the role of CNSs. They include case management, primary care, client advocacy, quality assurance, patient education, caregiver support, perceiving and teaching, professional autonomy, professional development, and team building.	given in this article as well as competencies. Organizations and Professional organizations are given that influence the roles of the CNS. Good tables looking at similarities and differences/gains and losses if the roles merge	
674	Schulmeister, L	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	Hospitals have been eliminating CNS positions to incorporate new priorities in healthcare. CNS can look to establish and independent	The roles of consultation is developed for a independent business adventure. The forces of change in healthcare	USA

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675	Schuurmans, MJ	1,3,4,5 (CNS non-periop)	Descriptive	Newkirk	Cole	consultation service. Public Law 105-33 in 1998 established reimbursement for CNS services in Medicare. Consultation services can lead to collaboration with lawyers. Competencies include education of attorneys about standards of care, review medical records, translate medical lingo, give depositions, testify in court, and educate the judge and jury. Another area of competency for establishing your own business is writing of business plans.	organizations influences the utilization of the CNS. CNS as consultant-	
						This article from an author in The Netherlands gives the five roles of the CNS as clinical practice, education, consultation, research, and innovation. The Minister of Health convened a Board to develop the position of CNS. The board recognized the following criteria: clinical expertise, specialized clinical expertise, and the benefit of patient as a result of this nursing expertise. Many CNSs are holding positions for specialized nursing without the CNS educational requirements. The Netherlands parliament passed laws to regulate the titles and responsibilities of healthcare workers. They left it up to the individual professions to give criteria for specialists. This article talks	This article elaborates on the influence that hospital organizations and country laws have on the utilization of the CNS. In addition, the CNS is regulated by professional organizations. All five roles of the CNS are discussed in regard to geriatric CNSs. Discusses the requirement for Master's degree results in increased salary	The Netherlands

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678	Schwirian, PM	4,5 (CNS non-period)	Descriptive	Newkirk	Cole	about geriatric CNSs. This specialty requires a Masters degree, experience with care of the elderly, primary care, ability to work independently, and outstanding communication skills. The Association of Nurses in Geriatrics outlined courses for the graduate degree. The University Hospital -Utrecht's department of geriatrics included a sort of job description that included coordinating activities to further nursing knowledge, implementing care of the elderly, and participating in research. The role of innovation is a nursing management role.	The author publishes in Hong Kong about the advanced practice roles in the USA. They use the definition of the ANA. The history of the CNS started with the psych CNS with a master's degree. The 1965 Nurse Training Act funded graduate study for nurses putting into full swing the development of other specialties for CNSs. During the 1990s, the cost of healthcare increased alarmingly and to effect cost-savings, institutions eliminated many CNS positions. Commonalities exist between the APN roles to include societal forces, gender issues, interprofessional struggles,	This article discusses the organizations and institutions that effect CNS practice.

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						<p>intraprofessional struggles, national organizational leadership, and establishment of graduate educational programs. In the USA, each state has their own state Board of Nursing which regulates the nursing profession. The Nurse Practice Act typically defines the authority of the board of nursing, scope of practice, types of licensures and titles, requirements for licensure, and disciplinary action requirements. The Nursing Council of Hong Kong is the equivalent. Advanced Practice nurses are defined by Title Recognition, right to reimbursement, and prescriptive authority. 25 states give the board of nursing sole authority in scope of practice with no regulatory requirements of physicians. 13 states scope of practice requires physician collaboration. 6 states scope of practice requires physician supervision. 6 states scope of practice is jointly decided by Board of Nursing and Board of Medicine. In terms of prescriptive authority, the bulk of states, 32, allow APNs to prescribe with some degree of physician involvement. The author emphasized the need for APNs to be involved in professional organizations, legislative arenas, and to</p>		

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679	Scott, H	2,3,4	Editorial	Nader	Newkirk	This short editorial is discussing prescriptive privileges amongst different professional bodies in nursing. There is not a consensus on who and what should be prescribable. The educational requirements for prescribing are disagreed on as well. The editorial closes by stating that nurses cannot and should not make medical diagnosis and therefore should not prescribe.	Competency of prescribing (2) education on pharmacology (3)nursing and government bodies (4) UK	
680	Scott, RA	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	Study conducted of graduate nursing prepared CNSs to identify their roles, activities and skills in the USA. Demographics of CNSs were identified. 3% were doctorally prepared. Most CNSs were hospital-based, were in line management positions, and were active in several professional organizations. Most were not nationally certified as CNSs, most were certified in their area of specialization. As expert practitioners, CNSs were involved from 29-91% of their time. The author listed activities for this role. CNSs were in educational activities 24-89% of the time. CNSs were consultants 18-96% of their time. Research took up 15-93% time. Administrative activities accounted for 34-85% of the time. 23 psychosocial activities, 19 psychomotor nursing skills and	Serious role activities were delineated by over 700 CNSs in the USA.	USA

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						44 advanced medical skills were identified as performed by CNSs. Most CNSs were unable to identify ways in which they were able to save the institution money or generate revenue.		
682	Sechrist, KR	1,4 (CNS non-period)	Descriptive	Newkirk	Cole	Review of the literature from 1992-1997 of the role of the CNS commissioned by the AACN. It summarizes the uniqueness of the CNS role, themes, gaps, and solutions in the actualization of the role.	Gives the history of the CNS, role ambiguity and gaps and barriers to practice.	USA
683	Semple, C	1,4 (CNS non-period)	Descriptive	Newkirk	Cole	Northern Ireland established its first CNS post in head and neck oncology. Author reports the roles that the CNS encountered. They listed three, clinical, educational, and research and audit. When describing clinical, the author included the indirect role of consultation and coordination. The research role was developing and not fully utilized. The establishment of this post was influenced by the British Association of Head and Neck Oncologists. They issued the BAHNO report that identified one of the basic needs on a multidisciplinary team was a CNS.	The author delineates the roles of the CNS. Organizations are described that influenced the creation of this post for the CNS. as clinician and educator	Northern Ireland
686	Sharu, D	1,3,4 (NP non-period, CNS non-period)	Descriptive	Newkirk	Cole	The author briefly describes the history of the NP and the CNS in the US. She develops the idea that the NP needs to merge training with that of CNSs in order to respond to the changing societal needs and to bring back NPs from	Talks about NP education needs. Talks about the roles of the NP and the CNS and the societal influences that play into decisions of each role.	UK

BIB NUMBER	STUDY AUTHOR	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
					A model for integration of the CNS, clinical nurse manager (CNM) and the Staff Development Instructor (SDI) is proposed. There is differentiation of the roles of each and demonstration of their unique contribution to the quality cost-effective care. Clinical practice is the hallmark of the CNS. They are responsible for identifying care options and outcomes and applying the nursing process. The CNS provides clinical leadership, but does not function routinely in the administrative role. The CNS can serve as expert coach to patients, families and staff. They can serve as preceptors for graduate programs. Research, collaboration, and consulting is discussed as roles for the CNS. In addition the CNS is suited to support institutional recruitment and retention by meeting the practice needs of staff nurses and providing emotional support.	The roles and the activities of the CNS are discussed and compared to the roles of the CNM and the SDI.	USA
687	Shawler, C	1,2 (CNS non-periop)	Descriptive	Newkirk Cole	The author explores the roles of the CNS in the model of HIV care. He uses Neuman Systems Model and incorporates the ANA guidelines for practice. The roles explained are expert clinical practitioner, educator, researcher, consultant and manager	Roles of the CNS in care of the HIV patient include practitioner, educator, researcher, consultant and manager	USA
689	Simmons, L	1,2 (CNS non-periop)	Descriptive	Newkirk Cole			USA

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690	Simpson, RL	1,2 (CNS non-perip)	Descriptive	Newkirk	Cole	The article concerns the role of the CNS in information systems selection. The author recommends that the CNS should be the nursing representative on the committee versus a nursing administrator. The CNS brings the focus of clinical care with them. The CNS has the professional self-awareness to provide necessary guidance to ensure the system selected has nursing perspective. The author recommends three principles an organization should engage in. The third principle is to empower the CNS is an affirmative vote on the committee and the power to veto. The CNS is a change agent and a problem solver.	Roles of the CNS in information systems selection include leader, change agent and problem solver.	USA
691	Skilbeck, J	1 (CNS non-perip)	Descriptive	Newkirk	Cole	The author explores the time CNS of the Macmillan Cancer Relief is spent in each of the roles. The diaries kept by the participants showed that on average the CNS spent 56.6% of the time related to direct patient care. Education was 10.9%. Consultation was 8.0%. Policy making was 6.0%. Research and audit was 4.0%. Staff support was 4.0%.	Amount of time spent on each of the roles of the CNS.	UK
694	Smith, JP	1,5 (CNS non-perip)	Editorial	Newkirk	Cole	Author reviewed the slow making history of the advancement of the CNS in the UK. The need of evidence-based nursing care on the basis of patient outcomes is the role of the CNS. The	Professional organizational influence of the CNS role. Discussion of the role of the CNS.	UK

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				American Association of Colleges of Nursing made a contribution to the progress by producing the 1994 statement on the certification and regulation of advanced practice nurses.				
				Conference report from 1997 on CNSs in UK. CNSs had authority to accept patients into their service. Specialists are widely based. They take on organizational roles and functions. A speaker recommended that USA and UK collaborate. Another speaker reported that the differentiation of the NP and the CNS is unclear, because they have commonalities. Another speaker said that the CNS first responsibility was for patient-focused care. Yet, many CNSs spent 80% of their time in managerial responsibilities. Few are involved in research. The speaker advocated for the CNS to at least have a first degree combined with clinical experience in their specialty of choice.		Many participants spoke about the role of the CNS, the educational requirements, and the skills involved with being a CNS.	Many participants spoke about the role of the CNS, the educational requirements, and the skills involved with being a CNS.	UK
695	Smith, JP	1,2,3 (CNS non-period)	Other Documents	Newkirk	Cole	Article describes current and emerging roles of cardiac nurses. Government strategy and policy drives the agenda to ensure quality care. National and international guidelines are developed. Roles of the Cardiac nurse include initiation of thrombolytic therapy, cardiac	Roles of the collaborator, direct patient caregiver are discussed for cardiac nursing. Organizations and institutions that influence the role are discussed. CNS as a practitioner	UK
696	Smith, K	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole			

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697	Smith, M					<p>rehab, management of chronic heart failure and atrial fibrillation. In addition, chest pain has been assessed by advances in nursing practice. Cardiac CNSs perform diagnostic coronary angiography and implant permanent pacemakers.</p> <p>Active participation on working groups nationally and internationally have influenced the establishment of evidence-based guidelines. Nurses are working on the European society of cardiology to influence guideline development.</p>	<p>The author summarizes research articles about the role of the CNS. The roles of the CNS has been categorized for activities performed, surveys for what roles CNSs, administrators, and others perceive that CNS roles should be. Other research studies discuss the development of the role and the influences of the organization and health care reform has on the CNS. Other research studies indicate that the job title of CNS did not accurately reflect the role of the past. The development of the CNS is dependent on the employing authority's perception of the role, placement of the CNS in the organization and perceptions developed by other</p>	<p>Roles of the CNS are discussed through the review of several different research studies. The organizations that utilize CNSs have influences on implementation of the role.</p>	UK

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						professionals and their preparation for the new position. CNSs in different specialties have different demands in their jobs. The author believes that demand is the best determinant for the role of the CNS.		
698	Smoyak, SA	1,3 (CNS non-period)	Editorial	Newkirk	Cole	Convention occurred on the blended roles of the CNS and the NP in the psychiatric nursing realm. Multiple representatives were there to lend discussion topics.	Blending the role of CNS and NP and educational requirements, curriculum were discussed.	USA
699	Soehren, PM	1,2,5 (CNS non-period)	Descriptive	Newkirk	Cole	Role opportunities include case management, expanded roles in acute care, practice in nurse-managed clinics, and collaborative private practice. The American Nurses' Association Council of Primary Health Care Nurse Practitioners and the Council of Clinical Specialists combined in 1990. They concluded that the roles were more similar than dissimilar. Highly similar activities were patient teaching, counseling, and psychosocial assessments. Another study found that core curricula of NP and CNS programs were very similar. The National League for Nursing supported the merger of the two APN roles. Pros for the argument that increased numbers would wield greater power to influence political agendas. Jointly prepared nurses would be more marketable. Cons for	Different professional organizations have weighed in on the merger of the NP and CNS roles. Roles and competencies were discussed.	USA

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						the argument was that the scope of practice for the two roles were different. Graduate programs would have to be longer if the programs merged.		
						The author believes that a CNS is involved in direct care and also influences patients, nurses and the system at large. Grad degree required. State to state variances of recognition range from no recognition to advanced licensure. The National Association of Clinical Nurse Specialists recommends that the CNS title should be protected as to be reserved for those with the proper credentials of education and certification. Agencies that certify CNS require a Master's degree. Content from the program must include CNS theory and concentration in the particular specialty. Other courses should be research, theory, ethics, health promotion, pathophys, pharmacology, health assessment. CNSSs provide holistic assessments, design programs of care, serve as leaders, consultants and change agents, and lead multidisciplinary teams. The three spheres of influence of a CNS are the patient, nursing professionals, and the organizational system.	Competencies are listed in this paper. Also described are agencies and professional organizations that influence CNS practice.	USA
700	Sole, ML	2,4,5 (CNS non-period)	Descriptive	Newkirk	Cole	A CNS interviewed two other CNSSs to discover what they do	It offers two practicing CNSs perspective on their	USA
702	Sosser, J	1,4 (CNS non-period)	Descriptive	Newkirk	Cole			

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704	Sparacino, P	1,5 (CNS non-periop)	Descriptive	Newkirk Cole		for roles. One spent most of the time educating staff about the diseases in their specialty. The other CNS spent a lot of time in patient education and wound care. She also oversaw care plans and coordinated other healthcare members. One explained the role as an expert clinician in a specialty area. In New York, CNS is not recognized as a title. In New Jersey, CNSs have device and medication prescriptive authority do to the title and what it means. In New York no specific requirements are absolutely necessary to hire a nurse in the title position of CNS. One CNS reported that due to her ability to support nurses and provide educational needs, she influences recruitment and retention of staff.	roles, competencies, and the influence of state boards of nursing can have on their career field.	The roles of CNSs are delineated. The influence of professional organizations is discussed.	USA

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706	Sparacino, P	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	<p>Author believes that a CNS is different from expert practice by experience. The CNS excels in analysis and insight. The definition of the CNS by the ANA in 1986 through study and supervised practice at the graduate level has become expert in a defined area of knowledge and practice in a selected clinical area of nursing. "It is the range and depth of knowledge, anticipation of patient responses, judgment about nonclinical variables, clarity of clinical decisions, and rationale justification which differentiates the CNS from the experienced clinician.</p> <p>Competencies of the CNS include demonstrating advanced nursing practice, modeling of exceptional patient care, improving patient care outcomes, influencing the professional practice environment, decreasing registered nurse turnover, increasing the level of the staff's critical thinking, increasing staff efficiency, implementing new programs successfully, decreasing equipment expenditures while increasing efficiency in equipment use, and ensuring that nursing practice standards are met.</p>	<p>The role and competencies of the CNS are discussed.</p>	USA

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717	Sparacino, P	1,3,4,5 (CNS non-period)				The author explores the history of four advanced practice roles. CNS practice combines the expertise that is derived from graduate study with clinical practice. Purpose of the CNS role is to improve patient care outcomes and is involved in direct care. The scope of practice focuses on assessment. The ANA established the educational prep for APN as Master's or Doctoral degrees, concentrating in a specific area of practice. The author states there is no consistency in graduate curricula. Suggests that all graduate students need ethics, research, leadership, nursing theories, educational theories, communication, and legislative issues. Practice curricula include physiology, pathophysiology, health assessment, role development, legal concepts, and economics of the role. In addition, the speciality focus will need curricula in that area. Practice standards are outlined by the ANA, and nursing specialty organizations. Certification demonstrates specialized knowledge and competence, yet not all specialties have a certification process in place. Challenges for CNSs include regulatory issues. Included in these are titling, scope of	Educational preparation is discussed. Organizations and professional entities are discussed. The roles for the CNSs are included.	Hong Kong, China

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						practice, and certification versus second licensure. Areas that CNSs need to make a difference in is research, practice guidelines, and outcomes management. Visibility is viability for the CNS.		
718	Spatz, DL	3,4,5 (CNS non- perioperative	Descriptive	Newkirk	Cole	APNs were compared and contrasted in terms of their characteristics for each. The women's health specialty was the background for the discussion. Multiple barriers exist that prohibit wider use of the APN. They include second licensure issues, prescriptive authority issues, reimbursement from insurance companies, inconsistencies in educational preparation and job functions. Studies exist that demonstrate the efficacy of using CNSs in the care of Women and Babies. This author introduced a new definition of the APN which was broad enough to encompass the various types of APNs. A push for Boards of Nursing to regulate solely any type of nurse is occurring.	Educational preparation was discussed in regards to what is required to be an APN for most states. Systems and professional organizations were discussed which influence the handling of the CNS role.	USA
720	Sperhac, A	1,3,4 (CNS non- periop)	Descriptive	Newkirk	Cole	Blending of the NP and CNS roles is advocated. The Rush Model integrates nursing service and education. Dean and other managers are dual hatted. They are practitioner-teachers. The authors feel that blending the roles provides graduates with versatility in a competitive environment.	Institutional influences have resulted in this blended role. All the roles are discussed especially in regards to the specific curriculum offered at this university.	USA

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						Health care institutions need cost-effective workers in today's financial constraints. The curriculum at this university cover the three areas of master's education: graduate core, advanced practice core, and specialty nursing focus. The role specific curriculum incorporates the sub-roles of direct care provider, educator, consultant, administrator, and researcher. The outcomes of this curriculum are graduates who deliver improved care and comprehensive coordinated care in a variety of settings.	Institutional influences have resulted in this blended role. All the roles are discussed especially in regards to the specific curriculum offered at this university.	USA
721	Sperhac, AM	1,3,4 (CNS non-period)	Descriptive	Newkirk	Cole	Same exact information as #720, except proposed for the Pediatric advanced practice nurse.	The role of the CNS and NP are briefly mentioned, but the educational track of this degree is scrutinized.	USA
722	Spiers,J	1,3 (CNS non-period)	Editorial	Newkirk	Cole	Letter from blended role student who does not advocate the program. Believes that both parts of this blended degree are being short-sticked.	Interview with Hildegard E. Peplau on the evolution of the Psychiatric CNS. Long history of what she went through to get to the original CNS title. Along the way, she talked about developing psychotherapy and integration of psychosocial nursing into curriculums. She talked about her experiences with the	USA
724	Spray, SL	1,3,4 (CNS non-period)	Descriptive	Newkirk	Cole		Major influences upon the education process of the CNS. Major influences from professional organizations and institutions.	USA

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725	Stafford, R					<p>college academia, psychiatrists, and professional organizations. Mentioned were the National League for Nursing Education, the American Nurses Association, state consultants in psychiatric nursing, and National Institute of Mental Health grants for faculty in psychiatric nursing. In her development of the master's degree in this field, she insisted on a two-year program, when other master's programs for nursing were only nine months. The World Health Organization's goal of "Health for all in the year 2000" pushed forward the concept of primary care. Peplau came up with the word "specialist" at Teachers College where they refused to publish it. Rutgers University used it, but it caused angst. The ANA used the term Clinical Nurse Specialist in their Social Policy Statement.</p>	<p>This is an author's search for an appropriate job description for the CNS. He mentions the history of the CNS and states that several wars saw the beginning jobs of the CNS. He compared the US development to the UK development. UK has responded to strides made in the US. He breaks the role of the CNS into 4 sub-roles: teaching, management, research, and clinical. He</p>	<p>Professional organizations and institutional influences are discussed in regard to the CNS. Roles of the CNS are delineated.</p>	UK

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726	Stankik-Hutt, J					<p>recommends that the UK nurses form an association which is similar to the US's American Council of Clinical Nurse Specialists in order to reduce the professional isolation of the CNSs in his country. A 1988 definition of specialist practice by the Royal College of Nursing involves a clinical and consultative role, teaching, management, research and the application of relevant nursing research. Only if a nurse is involved in all of these is he or she a specialist. Compares 9 different job descriptions and looks for the mention of the subroles in the job description-interesting</p>	<p>Author describes what a CNS, NP, and PA are. She compares the two roles of CNS and NP and supports two separate entities. She defines a CNS as an expert in clinical with theory and research related to a particular specialty. She states that CNSs influence patient outcomes through patient care, education, research, management, and consultation. They are prepared to manage complex healthcare delivery systems, too. Job titles include case manager, educator, QI manager, Community educator. She mentions courses that CNSs should take</p>	<p>Roles, competencies through job descriptions/titles are discussed. Educational preparation, organizations and professional organizations are all mentioned in this overview of the CNS.</p>	USA

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						to prepare them for the role. A credentialing organization is mentioned and she discusses state influences on the credentialing of the CNS.		
						Author supports the blending of the CNS and NP tracks in curricula. She points out research that reveals that differences in the role functions and activities of the NP and CNS are largely the result of the intrinsic differences in clinical practice. Due to the job deciding the role, she believes that it is important that both aspects be covered in the educational process. That way, the advanced practice nurse can decide which practice role fits them best upon employment. Core curriculum requirements with a mutual educational foundation in advanced practice could prepare flexible practitioners. Merging of the American Nurses Association Council of Clinical Nurse Specialists and the Council of Primary Care Nurse Practitioners was mentioned as an influence toward blending the roles. The American Colleges of Nursing in 1996 created a framework for educational preparation of the Master's Degree advanced practice nurse.	Roles, educational preparation of the CNS are discussed in comparison with the NP. Professional organizations as well as institutional hiring practices are discussed in their influence on the blending of the roles.	USA
727	Stark, SW	1,3,4,5 (CNS/NP non-period)	Editorial	Newkirk	Cole	Miniversion of article 727. Listing the advantages of blending: cost-effective	Roles, educational preparation of the CNS are discussed in comparison	USA
728	Stark, SW	1,3,4,5 (CNS/NP non-period)	Editorial	Newkirk	Cole			

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						education, core APN skills and knowledge, increased APN role recognition, opportunities and mobility in the work force after graduation, prescriptive authority, " reimbursement, and cost-effective healthcare. Negative effects of not blending: restricted scopes of practice, limited APN identity in healthcare, fewer opportunities to expand APN practice settings and healthcare positions that are lost to less qualified healthcare providers.	with the NP. Professional organizations as well as institutional hiring practices are discussed in their influence on the blending of the roles.	
729	Stephen, H	4 (CNS non-period)	Descriptive	Newkirk	Cole	The Author writes of upcoming meeting to clarify APN roles in the UK. UKCC consultation document wants to establish qualifications and titles of nurses operating at a higher level of practice. The UK government influences these decisions by driving quality outcomes to the forefront. In 1994, the UKCC lumped two levels of post-registration practice into one termed "higher level of practice". The two levels were specialist and advanced. The new standard would be generic and would relate to level of practice rather than a specialist area.	Institutional forces are establishing the titling and credentialing of advanced practice nurses.	UK
730	Stettler, CB	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	The role of research-based practice was explored among a small number of CNSs. CNSs reported using research-based Findings included that CNS use a high level of conceptual or cognitive	Role of the CNS as researcher and expert practitioner. Competencies for the research role were alluded to.	USA

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						use, use information both conceptually and instrumentally, use research in combination with other info, use colleagues/peers as source of info, and perceive importance of quality of research or scientific soundness as a criterion for use.	The author relates that APNs are important in the area of primary prevention. She advocates the sub role of change agent so that APNs become involved in the political process to improve their access to greater scope of practice. She describes the 4 APN roles and describes the CNS as having many roles and uses the five traditional sub role categories. She feels that there is unnecessary constraint on scope of APN practice, eligibility for reimbursement, and prescriptive authority. Nurses need to be well-informed and participate in the political process by joining their professional organizations.	USA
731	Stokes, RA	1,4 (CNS non-period)	Editorial	Newkirk	Cole	National Association of Clinical Nurse Specialists definition of CNS is given. The American Association of Colleges of Nursing graduate preparation model is given. Six core competencies of clinical care are: clinical and professional leadership, research skills, collaboration, ethical decision-	The role, competencies, educational preparation of the CNS are discussed. Organizations that influence the credentialing of the CNS are also discussed.	USA
733	Stotts, NA	1,2,3,4 (CNS non-period)	Descriptive	Newkirk	Cole			

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734	Strunk, BL					<p>making skills, expert guidance and coaching, and consultation. Author reports that experience alone doesn't make the APN. Nurses not in care of patients and their families are not APNs. The American Nurses Association Credentialing Center is discussed in its offering of credentialing exams for the CNS in certain specialties. Professional organizations offer credentialing exams to their specialty nurses, but some specialties don't have an advanced practice examination. The author uses only four subroles of the CNS: expert clinician, Consultant, Teacher, and Researcher.</p> <p>"The CNS role combines all of the best things about being a nurse in general, and an advanced practice nurse, in particular. It is an ideal role for a nurse who wants to remain at the bedside but to influence a patient's care at many levels. A CNS's contributions to quality patient care, efficient and expert delivery systems, evidence-based practice, and collaborative research, are integral to any healthcare delivery system.</p>	<p>Change agent role of the CNS thoroughly discussed. CNS's education, skills, and key positions in health care institutions make them well-suited for this role. Crucial to</p>	USA

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735	Sunnak, A					this role are consultation, collaboration, and role modeling. Competencies for this role are assertiveness, perseverance, listening skills, ability to keep asking questions, tolerance of system ambiguities, and ability to build an active support system. Experience as a CNS is more likely to lead to success in the change agent role. Health care changes are mandating that CNSs be in front on making health care more cost effective and higher quality.	Canadian article has two CNSs describe their jobs. Complex and creative, expert, authority, mentoring, public speaking, consultant, researcher, assessing technology, teaching patients are descriptions given. The Canadian Nurses Association defines CNS as an advanced practice nurse who holds a masters or doctoral degree in nursing with expertise in a clinical nursing specialty. 2,064 CNSs in Canada (0.9% of nurses). CNSs roles vary due to priorities of the institutions. 3 essential responsibilities: leadership, help integrate research findings, work towards change within the health care system. CNS usually works within a team of other healthcare workers. Canadian Association of Advanced	The roles and competencies of the CNS are discussed. Institutional influences and professional organizations are mentioned in the article. Canada

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						Practice Nurses relates that CNSs are independent and collaborative simultaneously. But the CNS in Canada can't independently diagnose and prescribe medications or tests like an NP.		
736	Survillo, AI	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	The author examines the roles and competencies of the CNS in terms of malpractice liability. Insurance companies decide premiums for coverage and CNSs must be aware that their practice may be in jeopardy if insurance companies do not cover them.	Roles and competencies discussed. Insurance companies influence on the utilization of the CNS.	USA
737	Tackenberg, JN	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	Case manager is discussed as a possible job for a CNS. The case management job is compared to the skills and competencies of the CNS. Societal changes that have influenced the development of the case management role are discussed.	The role and competencies of the CNS are discussed in regard to the case management job. The societal trends toward managed care influences the utilization of the CNS.	USA
738	Takacs, P	1,2,3,4 (CNS non-period)	Descriptive	Newkirk	Cole	Chart of all four APNs gives the number of each in the US, education requirements, and the functions and sites of practice. Great chart looking at the four APNs--in 1993, wonder if there is one more recent	Roles, competencies, and education of the CNS listed. The author describes difficulties in scope of practice due to varying state regulations.	USA
740	Tedford, BH	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	The Cardiovascular CNS in New Brunswick is looked at. The CCNS is capable of assessment and intervention with patients in CV disease. They are also useful in promoting the health of CV patients by increasing their control. The author delineates	The roles and competencies of the cardiovascular CNS are discussed.	Canada

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741	Thelander, B	5 (CNS non-periop)	Other Documents	Newkirk	Cole	Meeting minutes of the conference call between New York State Nurse Association and the Coalition of Nurse Practitioners, Association of Nurse Anesthetists, and the Network of New York Clinical Nurse Specialists in Psychiatric-Mental Health Nursing. Key to our project is their discussion of whether to use the APRN title or define the four APRN titles.	Professional organizations influence the titling of the CNS.	USA
743	Thompson, J	1,2,4 (CNS non-periop)	Descriptive	Newkirk	Cole	Talks of becoming a perinatal CNS. She coordinates, researches, and designs nursing care. She maintains a supportive and calm environment. Implements evidence-based labor techniques. Discusses difficult cases, interprets labs with staff nurses. Works collaboratively with staff. Interdisciplinary patient care with physicians. Designs new protocols. Represents the nursing unit and larger hospital. She wants certification in women's health, but one doesn't exist. She must take another exam and she chooses the Med-	Roles and competencies delineated for the perinatal CNS. Certification and NACNSs influence on this process examined.	USA

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				Surg CNS exam. NACNS estimates 75% of graduate degree prepared CNSs don't certify due to no specific exams available.				
744	Thompson, MW	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	Critical Care CNS (CCCNS) should consider the home health care field where the acuity of patients is increasing and the need for expert care from involvement with a qualified nurse is needed. The teaching, assessing, consultative and research expertise is needed in home care. Home care professionals frequently use the CNS to help them develop a plan of care. A job description of the CCCNS in home care is offered.	Roles and competencies are discussed. The societal impact of medical care is influencing the use of the CCCNS in non-traditional settings. CNS as consultant, educator, researcher and practitioner. Example of job description	USA
745	Thorius, M	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	Comparison of the roles of the CNS, NP, and other APN. Today's society changes within the healthcare system are an influence on the need for cost-effective quality providers. The author delineates what a CNS is. RN, masters or doctoral degree in nursing, specialized in area of clinical practice. List specialties currently available for CNSs. Competencies are listed.	Roles, and competencies are listed in the article for the CNS. Outside institutional influences are briefly discussed as to why the CNS is a necessary player.	USA
746	Thornburg, J	4 (CNS non-period)	Descriptive	Newkirk	Cole	New Mexico's Board of Nursing lobbied for CNS prescriptive privileges and won.	State government's influence on the scope of practice of the CNS.	USA
747	Thornburg, J	2,3,4 (CNS non-period)	Descriptive	Newkirk	Cole	New Mexico's Board of Nursing has rules and regulations to obtain full prescriptive privileges. They	Competencies and educational requirements for prescriptive authority is established by the New	USA

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						require 9 academic hours of masters level course work in patho, assessment, and pharmacology. 400 hours preceptorship required in prescribing and completed within 6 months.	Mexico Board of Nursing.	
748	Thorson, M	2,4 (CNS non-period)	Descriptive	Newkirk	Cole	CNS working in a trauma facility. She coordinates care of the trauma patient, research coordinator for trauma studies, staff support, protocol development, education , hospital committees, and PI activities. He certification and state licensure allows her to prescribe and treat patients. Medicare refused to reimburse her, but they were in err. Medicaid does reimburse CNS with prescriptive authority.	Competencies are discussed of a new CNS. In addition, the reimbursement from Medicaid is an influence on practicing CNSs in Minnesota.	USA
750	Tidwell, SL	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	Societal influences such as managed care, increased patient acuity and outcome-oriented evaluations have influenced the decision to use CNSs. Case management is a competency of the CNS. Positive outcomes when utilizing a CNS in the case management role are numerous.	The roles and competencies of the CNS are prime for use as a case manager. Societal influences have changed the way CNS are being utilized.	USA
751	Tierney, M	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	collaboration of the CNS and the NP in meeting needs of patients in a service line is addressed. CNS generally mentor, role model, change system processes and influence patient and family care management through direct care. The NP focused on clinical decisions related to	The roles and competencies of the CNS and the NP are compared and recommended as compatible to handle service line management.	USA

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						complex patient problems. As change agent, CNSs can manage teams. They monitor the progress and outcomes. The two work together to identify and intervene in complex patient problems to improve care.		
						Societal influences led to change in how CNSs were utilized in the 1980s. The article gives CNSs suggestions on how to deal with change in order to adapt and keep their jobs.	Organizational/institutional changes affecting the utilization of the CNS.	USA
752	Tierney, MJ	4 (CNS non-period)	Descriptive	Newkirk	Cole	Physician research into the comparison of care on long-term effects of rheumatology patients. The role of the CNS as the direct care provider is evaluated in outcomes.	The role of the CNS in direct patient care.	The Netherlands
755	Tijhuis, GJ	1 (CNS non-period)	Qualitative	Newkirk	Cole	Generic APN care advanced as cost-efficient. Demonstrating effective clinical outcomes. The APNs collaborate with physicians to develop clinical pathways. They serve on medical staff and hospital committees to facilitate change. They monitor patient progress, function as a resource and educator for nursing staff. They provide support and advocacy for patients. Assist with discharge services for complex patients.	The role and competencies of the CNS as an APN are delineated and role modeled at a community hospital.	USA
756	Timberlake, A	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	Discussion over the proposed Texas Board of Nursing decision to eliminate titles and regulate titles for use in Texas. The ANA and American Association of Colleges of	Societal pressures and professional organizations are in debate about the titling and certification of APNs.	USA
762	Trossman, S	4,5 (CNS non-period)	Descriptive	Newkirk	Cole			

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763	Tucker, S					Nursing (AACN) assembled representatives to discuss education, certification, and licensure of APNs. The Texas BNE is concerned about patient safety. The regulations would force certain specialty nurses into a generalist category. Programs in Texas have closed in anticipation of the new rules. Also discussed is the certification exams for APNs. Some believe that nurses should pass a certification exam for any APN role.	Program started for Med-Surg CNSs to get them up to speed for prescriptive authority. A list of positive reasons to obtain prescriptive authority was given. Organizational influence occurred when the National Council on Nursing Education and Practice (NCNEP) illuminated the benefit of services provided by a CNS. Governmental boards of nursing have approved the title of CNS with certification. For Minnesota, a CNS must be certified as a CNS, completed at least 30 hours of formal study on prescribing practice. Winona State University in Rochester developed a Post-Master's CNS Certification Program. They went by criteria from the American Association of Colleges of Nursing, NACNS and the Revised Minnesota Nurse	Competency of prescriptive authority. Education needed to support prescriptive authority. Governmental and professional organizations influence on the ability of CNSs to obtain prescriptive authority.

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765	Twardon, C	1,4 (CNS non-period)	Descriptive	Newkirk	Cole	Use of the CNS in home care is explored. The five traditional roles of the CNS are outlined. The author believes that using CNS in home care can promote quality care while facilitating the development and expansion of home health services. Factors affecting the need to utilize CNSs in home care include increasing complexity of patients needs, societal changes in how to deliver care and the financial constraints and nursing shortages.	The roles of the CNS in home care are delineated. Includes the traditional 5 sub roles-although used most often as consultant in home care Institutional systems influence the role.	USA
767	Urdan, LD	2,4 (CNS non-period)	Descriptive	Newkirk	Cole	The author rehashes societal and organizational influences on the role of the CNS. Due to these influences the CNS is qualified to evaluate outcomes of the activities and programs they are involved with. Managed care has impacted greatly on utilization of CNS. JCAHO's push for clinical and organizational indicators was an impetus for change. Health Care Finance Administration was established to look at the activities/competencies of the CNS were discussed and influences from organizations on the role of the CNS.	USA	

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						ways to make healthcare effective.		
						Author relates her entire experiences of beginning a new role established by the hospital in critical care CNS. The CNS describe her interaction with patients and surgeons. The CNS follows the patients from pre-op to post-op. Quantitative and qualitative evaluations were conducted that showed decreased length of stay, increased patient satisfaction, decrease in charges, increased staff nurses and physician satisfaction. She related that beginning her role she signed a collaborative practice agreement with the hospital, surgeons, and herself. She also created a job description of the Cardiovascular CNS. She interacted with her board of nursing to ensure she was remaining in her scope of practice. Of note, as a CNS, she would often do the history and physical pre-operative. Throughout the course of the patient's stay she would perform re-assessments. She maintained contact with the families. She also made herself available through phone consultation and reported that 67% of patients utilized this option.	The Cardiovascular CNS roles, competencies were discussed. The institution's influence on the role were also mentioned. Example of job description	USA
768	Vaska, PL			1,2,4 (CNS period)	Descriptive	Newkirk Cole	Although this author talks in general about the pediatric	USA
770	Verger, J			1,2,3,4 (CNS non-period)	Descriptive	Newkirk Cole	Roles, competencies, educational preparation	USA

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772	Visalli, HN	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	and critical care APN as both CNS and NP, she mostly speaks about NPs. She described systems that have influenced the development of the role of the APN. She develops several issues that these APNs deals with and it includes standardizing educational preparation, role definitions, reimbursement for services, recognition of practice, supervision, scheduling, and staffing, integration of the APNs into the nursing leadership, and continuing education support.	and influences on the utilization of the role are discussed.	USA
774	Vollman, KM	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	The author advocates blending the CNS role into the quality improvement leadership role. Societal changes that shape the health care arena impact on the utilization of the CNS. This author relates several sub roles for the CNS: teacher, clinical expert, practitioner, role model, consultant, advocate, change agent, liaison, and researcher. Collaboration and comprehensive care are essential components of competency for the CNS. The CNS can offer a qualitative approach to nursing care for the QI department. Examples of the specific role competencies are delineated.	The role of the CNS in quality improvement is discussed. Institutional influences have changed the utilization of the CNS.	USA

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						culture shapes clinical practice and determines the difficulty of change to occur. The CNS can help implement change through recognizing appropriate techniques to integrate it. The CNS performs assessments of the unit/system. Nonjudgemental communication is key to assessment. The CNS must be able to outline their role for marketing purposes and utilization purposes. They can role model professional behaviours to staff. Consultation, direct patient care, and collaboration with other members of the health care team are competencies of the CNS. Process improvement plans can be designed, implemented, and evaluated by the CNS. The CNS also cares for the organization by serving as Change agent. They can research and write standards, policies/procedures, and provide cost-effective care at the bedside. They also evaluate new products.		
775	Voorhees, M	2 (CNS non-period)	Descriptive	Newkirk	Cole	California CNSs reported on activities performed. The top five activities were consult with others disciplines, attend meetings, teach staff, evaluate treatments, and consult to support staff. CNSs are involved in a variety of activities.	Competencies through different activities are listed by CNSs	USA
777	Wadlund, D	3,4,5 (NP)	Descriptive	Newkirk	Cole	Extensive review of the new	The professional	USA

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		periop)				perioperative NP program at a PA university. Bases the program off of the Acute Care NP program so that the perioperative NP can sit for certification and obtain a licensure in most states. In addition, a semester is spent becoming a RNFA so that after 200 hours post-degree, the person may sit for the CRNFA exam. AORN produced in 1994 the Perioperative Advanced Practice Nurse Competency Statement for registered professional nurses who specialize in perioperative nursing. This program is 48 credit hours. the America Nurses Credentialing Center designs the exams to provide credentialing of the acute care NP.	organization that influenced the making of this program is discussed. The educational requirements for the perioperative NP are delineated extensively. Look up university to see if program is still offered	
778	Walden, M	4 (CNS non- periop)	Editorial	Newirk	Cole	The Wound Ostomy and Continence Nursing Certification Board believes that establishing valid APN examinations for their members is cost-prohibitive. They want to look at a professional portfolio to establish competency and thus credentialing.	Utilization of the CNS in non perioperative practice is influenced by the need for certification.	USA
780	Walker, J	3 (CNS non- periop)	Descriptive	Newirk	Cole	An extensive description of CNS programs in the US. 157 different programs from 139 different schools(responding to survey). The mean number of hours for a semester-based school were 41.4. The mean number of clinical/practical clock hours was 416.2. Half of	1993-The educational criteria for 157 CNS programs was evaluated. The organization for the practice influenced many of the programs in their curricula.	USA

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						<p>the respondents used the National Association of CNS's Statement on CNS Practice and Education to guide their curricula. 66% of programs had 1-10 applicants during the previous year. 68% said that graduates don't have difficulty finding a job.</p>		
782	Waller, S	4 (CNS non-period)	Descriptive	Newkirk Cole	The author describes her transition from a CNS to incorporate the case management role of her hospital. She explains four sub roles of the CNS that she utilizes while in her new job. The hospital organization influences her job. She continues to have patient contact, assessing their needs, implementing interventions,	<p>The roles and competencies of the CNS in the case management job are delineated. The influence of the institution on the job is discussed.</p>	UK	USA

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						and evaluating the interventions. Collaboration and negotiation are key competencies. She consults with physicians and coordinates services. She educates nurses, physicians about DRGs, reimbursement, utilization of resources, and JCAHO. The researcher role is the least utilized. She frequently uses the managerial component.		
787	Watson, A	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	A Psychosocial Oncology CNS enhances staff and patient well-being. She facilitates patient and staff support groups, runs team-building workshops, and provides conflict resolution services.	The roles and competencies are discussed along with activities. CNS as consultant and educator	USA
788	Webber, J	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	Macmillan Nurses in the UK have taken on expanded roles as CNS. They are responsive to changing situations and emerging needs. Several of these are listed in a chart. They teach in patient care and to staff nurses. They are a resource and consultant as well. They promote high standards of care by acting as a change agent.	The role and competency of Macmillan nurses are discussed. Societal influences are delineated. Functioning as a CNS based upon experience-- main roles are educator and practitioner	UK
792	White, JH	3 (CNS non-period)	Descriptive	Newkirk	Cole	Describe the CNS program of psychiatric-mental health nurses. When developing this curriculum they looked at the blended role and decided against it.	CNS in the educational content. Looks at developing a curriculum, implementing it and the barriers/results	USA
793	Wickham, S	1,3,4 (CNS non-period)	Descriptive	Newkirk	Cole	A review of the literature to discover the CNS role and education requirements. Societal and government	Governmental agencies are discussed in their influence on the titling of CNS. Roles and education	Ireland

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						<p>Influences are discussed in the establishment of requirements. Titling of the CNS in Ireland doesn't appear to be settled.</p> <p>Author explores problems of CNSs working with community health nurses, called district nurses. She reviewed the literature to establish what roles the CNS had and interviewed CNSs and district nurses to get their views towards the collaboration role. The reasons that CNSs were created were delineated and included the movement towards purchaser-provider system of healthcare. The Royal College of Nursing's definition of roles of CNSs included only four: clinical expert, teacher, manager, and researcher. The survey completed gave the view of each type of nurse on the percentage of time spent in each of the four roles by the CNS. The problems established for CNS use include role ambiguity, De-skilling colleagues, role too task-oriented, cheap and easy alternative, and gaining credibility in the community. To increase effectiveness, the author recommended and put into practice a weekly meeting between CNSs and district nurses which seemed to alleviate many problems</p>	<p>are discussed throughout this review of the literature.</p>	The role of the CNS in community health nursing. Societal influences briefly described in the creation of the CNS.	UK
795	Williams, A	1,4 (CNS non-periop)	Descriptive	Newkirk	Cole		The article discusses the need for a blended CNS/NP	USA	
796	Williams, CA	1,2,3 (CNS non-periop)	Descriptive	Newkirk	Cole		The role and competencies of the CNS/NP in the		

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797	Williams, CA	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	The role of the CNS as the acute pain management nurse. Utilizing the perioperative nurse in this role may well suit it. The areas that the CNS here deal with are analgesic regimes, leadership skills, education, promoting staff development, interpersonal skills, and collaborative relationships with other healthcare workers.	Similarities and differences in CNS and NPs were explored via a questionnaire. CNSs spend less time in direct patient care than NPs. They spend more time in education, consultation, research, and administration than NPs. Both groups were satisfied with their roles. Revenue-generating activities were delineated by both groups.	mental health field is discussed. Additionally, the educational requirements of a school are delineated.
798	Williams, H	1,2 (CNS non period)	Descriptive	Newkirk	Cole	UK in 1995 had 67 specialties in 80 hospitals. Key to the specialist role is education, information and support nurses. Continued regular contact is essential in maintaining clinical skills and expertise. To become a Macmillan nurse, five years of experience in a specialty and at least a diploma and clinical	The roles and competencies were listed by CNS and NP respondents to a questionnaire.	USA
800	Willis, J	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	Roles and competencies of the CNS in the acute pain management arena and why a perioperative nurse would do well.	Roles and competencies of the specialist are discussed.	UK

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						teaching experience. Not always a master's degree CNS have autonomy and power to bring change to care delivery.		
803	Winterton, M	2,4 (CNS non-period)	Editorial	Newkirk	Cole	The author questions whether the CNS should cost out their services to determine whether they are truly saving a facility money. Maine has passed state regs requiring the cost of nursing inpatient services be listed separately.	The organization has influence over the future of the CNS. They are looking for ways to save money. CNSs need to be competent and show their value to the institutions.	USA
804	Wolf, GA	1,3,4	Editorial	Newkirk	Cole	Author writes of the importance of the CNS. Believes that today's CNS must have focus on systems as well as patients. Gives examples of practice that a CNS could be involved with. These include correcting system-wide factors contributing to problematic outcomes and ineffective nursing care. Also, a CNS could develop strategies to change nursing care requirements and evaluation of new technologies. The author recommends curriculum for the CNS to include systems theory, administrative, reimbursement methods, and cost evaluation techniques. Shows change of CNS focus from just patient and nurse to a system's focus	The author recommends educational requirements for the non-specific CNS. The author gives examples for roles of the non-specific CNS. The author describes how her particular organization has benefited from CNSs.	USA
806	Wong, FKY	1,4 (CNS non-period)	Qualitative	Newkirk	Cole	Hong Kong requires a "first degree" plus 3 years experience working specialty after getting certification. Five major roles identified. Clinical, research, project development,	Discussed five major roles of the CNS. They are different than the traditional ones. Can be categorized as the same, different names/titles. The Hospital	Hong Kong, China

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						Authority was identified as having an influence on the development and utilization of the CNS.		
807	Wong, FKY	1 (CNS non-periop)	Descriptive	Newkirk	Cole	APN (CNS) work is goal-directed. APN's provide a holistic approach to care. They focus on symptom management and prevention of complications. APN's use evidenced-based practice to promote wellness. Definition of APN includes master's degree.	Roles of the CNS- are discussed.	Hong Kong, China
808	Wood, CM	1,3,4 (non-periop)	Descriptive	Newkirk	Cole	A survey was conducted for California CNSs (those calling themselves CNSs). 65% of them had Master's Degree in Nursing. Most practiced in hospitals, had patients as clients mostly. Most identified their primary role as clinical expert. Public recognition, legal recognition were identified as major barriers to practice. CA (in 1996) did not recognize CNSs for licensure and certification. Of the graduate-prepared RNs, 80% used the CNS title and 68% had CNS job descriptions.	Roles, education, and barriers to practice to include state nursing acts were identified by respondents.	USA

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						Some OR/RNFA/PAR nurses use the title CNS. Graduate RNs more likely to use research to improve care.,		
809	Woodring, BC	2 (CNS non-period)	Qualitative	Newkirk	Cole	Commenting on Ross, SK article, agrees with expanding the traditional role of the school nurse to include traditional roles of CNS. Also suggested that school nurses develop a partnership with a CNS in order to develop and carry out research on the school nurses' population.	Competencies of several of the CNS roles were discussed.	USA
810	Woodring, BC	1 (CNS non-period)	Editorial	Newkirk	Cole	Author describes his experience with starting his own business as CNS. He gives pointers for success. He made his business into an continuing nursing education business. The roles of educator and consultant are	Role of the CNS as researcher, consultant, and expert practitioner.	USA
811	Woodruff, D	1,2 (CNS non-period)	Descriptive	Newkirk	Cole		Roles of the CNS and competencies are discussed. CNS as entrepreneur and educator	USA

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						Nursing majority desire emphasized. This CNS also demonstrated competencies of managing his own business.		
812	Woods, LP	3,4 (CNS non-period)	Qualitative	Newkirk	Cole	Educational prep discussed for the CNS. System forces in effect that influence the CNS. Good table that looks at role titles and their education, practice, and characteristics	UK	
814	Wright, JE	4 (CNS and NP non-period)	Editorial	Newkirk	Cole	The author provided information for nurses to consider when discussing merging of NP and CNS roles. We must show our worth in quality, and cost. Must be recognized by legislation. APN are accomplished already in the consumer change of more responsibility for their healthcare. Participation in studies to prove our worth. Recognize individuals freedom to choose provider. Must	USA	Systems that influence the CNS utilization were discussed.

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816	Wyatt, JS	1 (CNS non-period)	Descriptive	Newkirk	Cole	Reports on National Sample Survey of Registered Nurses. As of 2001: 54,000 classify themselves as CNSs. 13,000 reported employment as CNS.	Role of the CNS in general. reference for access to numbers. Where can we find this RN population info--would be good to have us.	USA
818	Yanko, JR	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	CNS role in initiation of shared governance within nursing department. Skills required for succeeding: facilitation and mentoring skills, systems and operations, management training, leadership skills, staff development training, communication skills, patience, listening skills, supportive of manager.	Roles and competencies a CNS must employ when acting as facilitator for the implementation of shared governance are listed.	USA
819	Yoder, LH	1,2,4 (CNS non-period)	Descriptive	Newkirk	Cole	Role of CNS in relation to media. Communication skills as a competency. Able to influence positively the public awareness of professional nursing. Nurses must communicate info to the public about themselves and their work.	Roles, competencies discussed as well as the systems that influence the CNS role. CNS as educator to public	USA
820	York, LN	1,2 (CNS non-period)	Descriptive	Newkirk	Cole	Psychiatric CNS in chemical dependence serves mainly as consultant. Competencies of a psych CNS are psychosocial assessment, diagnostic skills, knowledge of human behavior, therapeutic interpersonal skills, and knowledge of clinical therapeutics. Personal qualities of psychCNS include patience, compassion, respect for human pain and suffering, maintenance of positive attitudes and ability to convey	Roles and competencies of the CNS in a psych position. CNS as consultant	USA

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						Role of CNS in a medical products company for R&D. corporate environment can incorporate all five CNS roles. Job description sample given. Experience in clinical research methods, computerized databases, and great communication skills. Competencies include knowledge of FDA regs and national standards (AAMI), independent and critical thinking, self-direction, versatility, time-management skills, leadership.	hopefulness.	Roles and competencies discussed. The institutional influences on the CNS were also discussed. CNS is able to use all sub roles as a research and design member-example of job description	USA
823	Young, SL	1,2,4 (CNS non-perip)	Descriptive	Newkirk	Cole	Surgical Nurse Practitioners as RNFA. 2003 federal regs mandated no more than 80 hours week for surgical residents. Increased demand for RNFA. Competencies include performing H&Ps, establish diagnosis and treatment plans, collaboration with surgeons, performing endoscopic exams, writing procedures, booking cases, knowledge of anatomy, pathophysiology, and surgical procedures. Other competencies include aseptic technique, scrubbing, gowning, surgical techniques, positioning, draping, prepping, knowledge of surgical instrumentation and surgical site infections. Requires physical energy, motivation, and desire to learn. RNFA must anticipate next step in			
825	Zarnitz, PM	1,2,4,5 (NP perip)	Descriptive	Newkirk	Cole		Roles and competencies and institutional and professional organizations all are discussed.	USA	

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
826	Zuzelo, PR					<p>procedure and have manual dexterity. continuity of care for patients and surgeons benefit from consistent first assistants.</p> <p>Based practice on Society of Otorhinolaryngology; Head-Neck Nursing Guidelines for ORL; Head-Neck Nursing Practice; and 2000 Core Curriculum for the RNFA.</p>	<p>Differences in educational experiences of CNS and NPs and suggestions for perioperative CNS practice.</p> <p>AORN has position statement describing responsibilities of perioperative advanced practice nurse. Doesn't distinguish between CNS and NP. NACNS Statement on CNS practice and Education required graduate degree in nursing. Describes core curriculum between all APN types. Clinical NS Certification not required consistently in all states.</p> <p>American Academy of Nurse Practitioners represents NPs in all specialties. CnS intervenes in complex cases, provides support to staff, consultation, multidisciplinary meetings, designing programs, and projects at various levels of an organization. CNS has 3 spheres of influence: patients, nursing personnel, and organizations/networks.</p> <p>Describes essential characteristics of CNS perop. Influencing others, attributes of roles, competencies, educational requirements are all discussed at length. Institutional influences and professional organizations influence on the role of the CNS.</p>	USA

BIB NUMBER	STUDY AUTHOR	STUDY OBJECTIVE	DOCUMENT DESIGNATION	PRIMARY REVIEW	SECOND REVIEW	BRIEF SYNOPSIS	IMPLICATION TO STUDY OBJECTIVES	COUNTRY OF ORIGIN
828	Chang, KPK					Questioned/surveyed physicians, nurse executives, ward managers and registered nurses, and nurse specialists on the perceived importance of each of five role components of a CNS. The five roles were admin, clinical, consultation, education, and research. Results showed differences in perception of importance. Doctors and nurse executives viewed education role as most important. Nurse specialist and RN's ranked clinical first. Ward managers ranked research as Highest. In contrast, occurrence of clinical role performance was ranked most frequent by nurse specialists, ward managers, and RNS; All groups accepted all five role components as at least moderately important. Sometime nurse specialists must offer function as nursing executive or ward manager.	Roles of the CNS discussed.	Hong Kong, China

* Articles that only revealed the CNS as functioning in a specific role were removed from the RST and categorized into "Objective 1: Role – CNS as a (practitioner, advocate, educator, case manager, etc.)"

Appendix B

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